

PERMANENT WAY  
ROLLING STOCK  
AND  
TECHNICAL WORKING

**RAILWAYS**

BY

**CH. COUCHE**

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PRÉSIDENT DU COMITÉ CONSULTATIF DES MACHINES A L'EXPOSITION UNIVERSELLE DE 1878, ET DE LA CLASSE 64  
(MATÉRIEL DES CHEMINS DE FER) DU JURY INTERNATIONAL, ETC.

**VOLUME III WITH ATLAS OF 21 PLATES**

TRANSLATED FROM THE FRENCH BY

**J. EDWARDS WILSON**

LATE ENGINEER IN CHIEF OUDH AND ROHILKUND RAILWAYS

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1882

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# PLATES

OF THE  
THIRD VOLUME

PRODUCTION AND DISTRIBUTION OF STEAM.

MEANS OF DESTROYING AND MODERATING VELOCITY.

POWER AND USEFUL EFFECT OF THE LOCOMOTIVE.

SUPPLEMENT : REVISION, ADDITIONS.

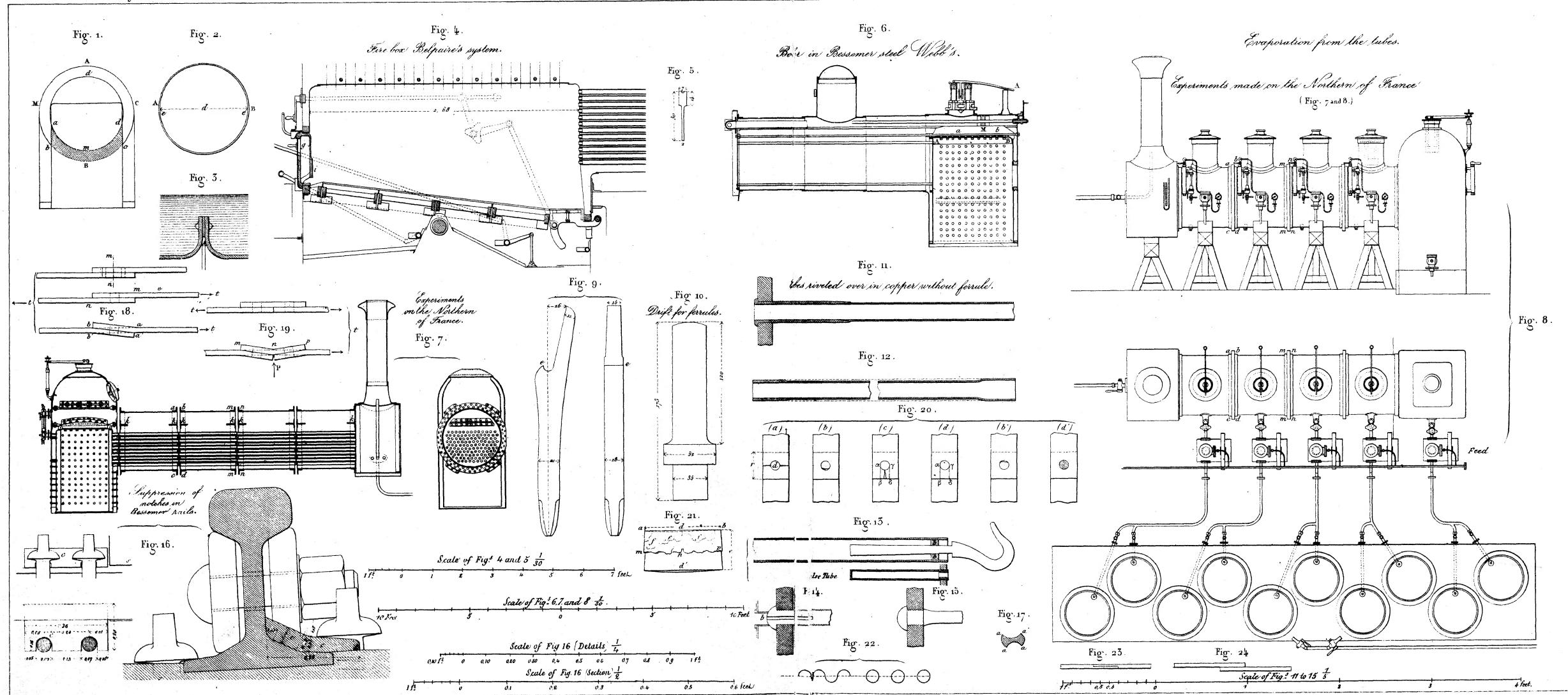
- Pl. I . . . . . — Locomotives. — Boiler — Evaporation. — Various details.  
Pl. II . . . . . — Locomotives. — Boiler — Stays — Smoke-consuming apparatus — Condensation.  
Pl. III . . . . . — Locomotives. — Erosions — Stays — Smoke-consuming apparatus.  
Pl. IV . . . . . — Locomotives. — Boilers — Regulators — Valves — Blowers.  
Pl. V . . . . . — Locomotives. — Exhaust — Chimneys — Distribution.  
Pl. VI . . . . . — Locomotives. — Different valve-motions.  
Pl. VII . . . . . — Locomotives. — Different valve-motions.  
Pl. VIII . . . . . — Locomotives. — Some details of the machinery.  
Pl. IX . . . . . — Locomotives. — Effort of traction at the dead point and up to a certain limit of reverse admission — Counter-Steam.  
Pl. X . . . . . — Means of stopping. — Reversing the valve motion — Injection. — Landsie, Krauss Systems.  
Pl. XI . . . . . — Divers brakes.  
Pl. XII . . . . . — Divers brakes.  
Pl. XIII . . . . . — Tender and wagon — Brakes.  
Pl. XIV . . . . . — Various brakes. — Resistance of trains.  
Pl. XV . . . . . — Various brakes. — Tachometer — Resistance of trains — Influence of curves.  
Pl. XVI . . . . . — Brake with counterpoise and transmission of the Northern of France — Newall's brake.  
Pl. XVII . . . . . — Useful effect of locomotives. — Supplement.  
Pl. XVIII . . . . . — Work of expansion and of compression. — Steam and water — Supplement.  
Pl. XIX . . . . . — Supplement.  
Pl. XX . . . . . — Supplement.  
Pl. XXI . . . . . — Supplement.



## **LOCOMOTIVES - BOILER - EVPORATION, VARIOUS DETAILS.**

Vol. III. Pl. I.

C. COUCHE. Railways.

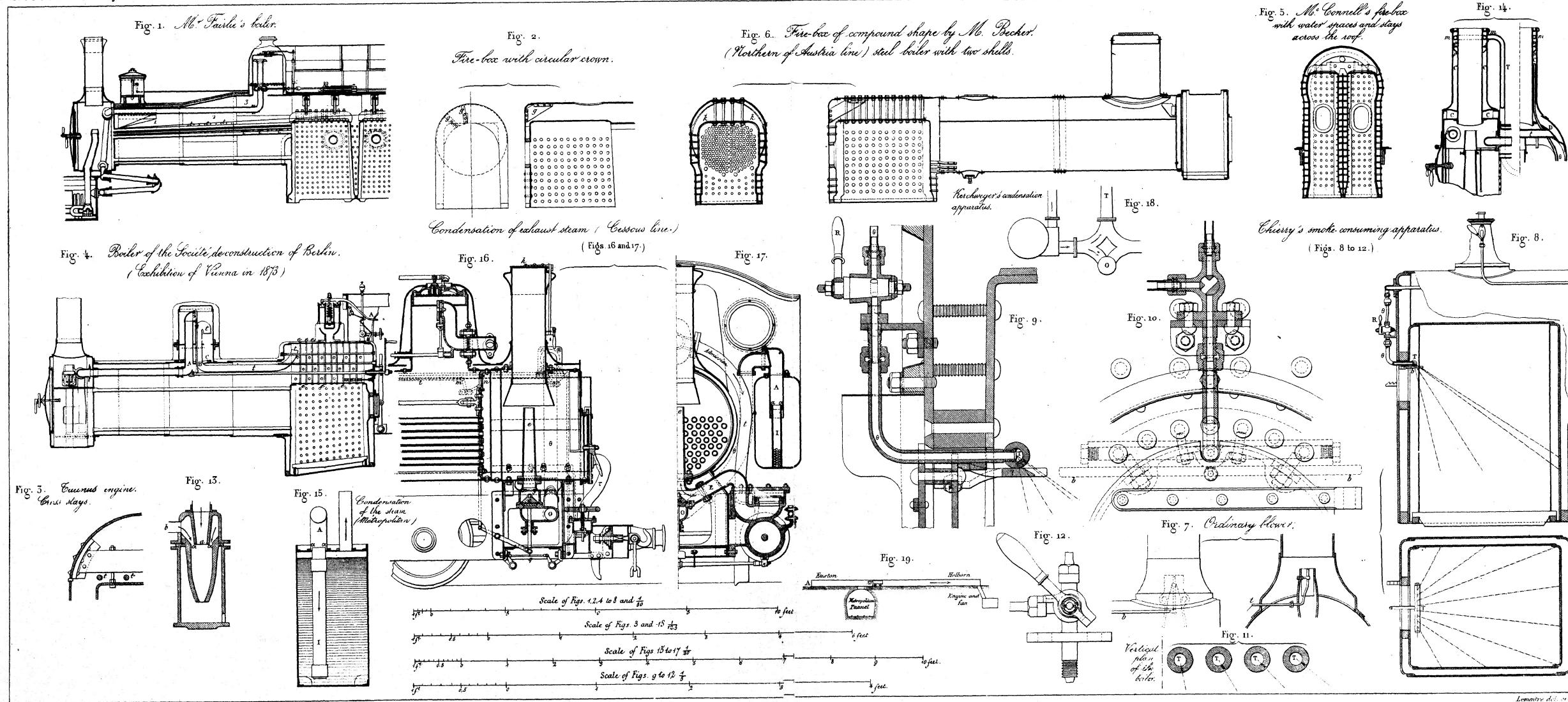




LOCOMOTIVES.—BOILER.—STAYS.—SMOKE-CONSUMING APPARATUS.—CONDENSATION.

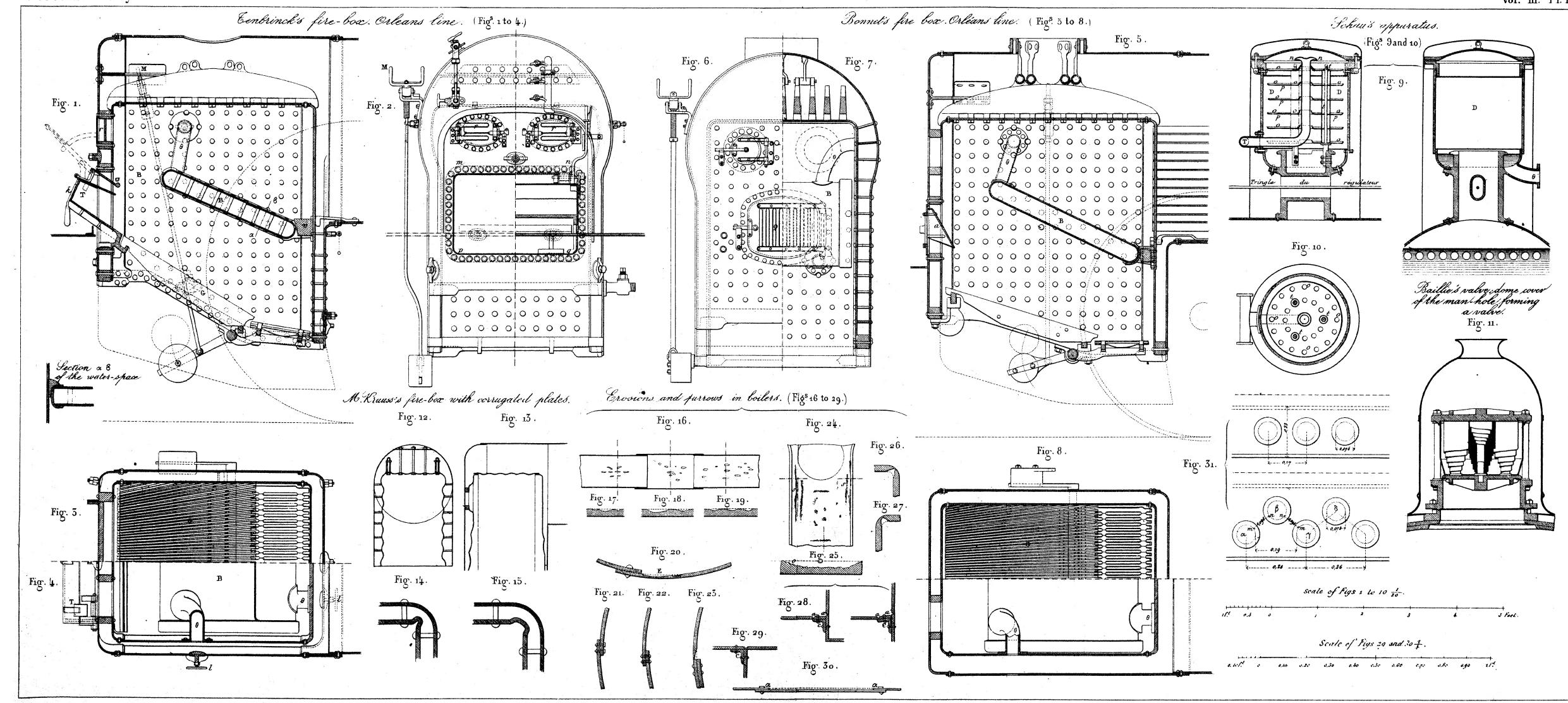
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Lemaitre del. & sc.



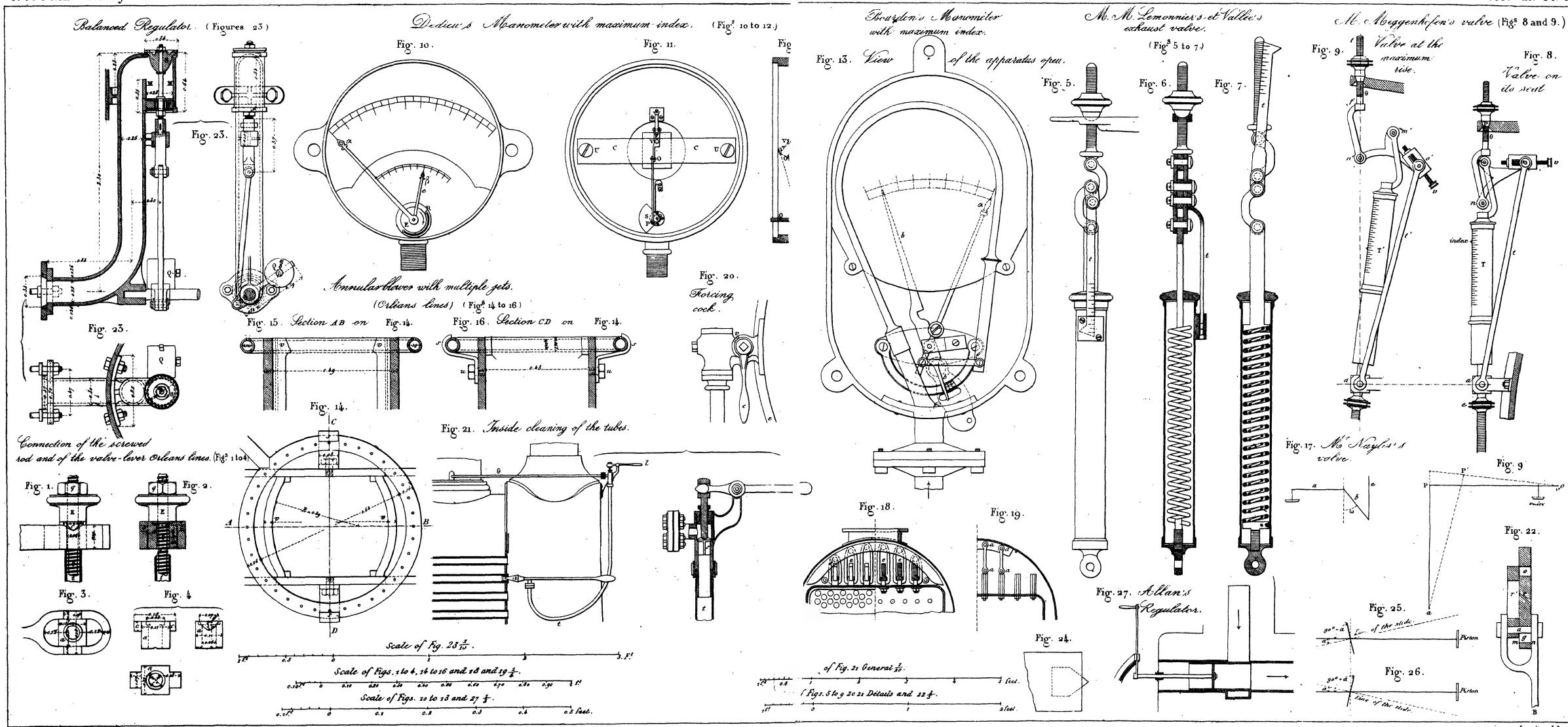




LOCOMOTIVES.— BOILERS.— RETORS.— VALVES.— BLOWERS.

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Vol. III. Pl. IV.

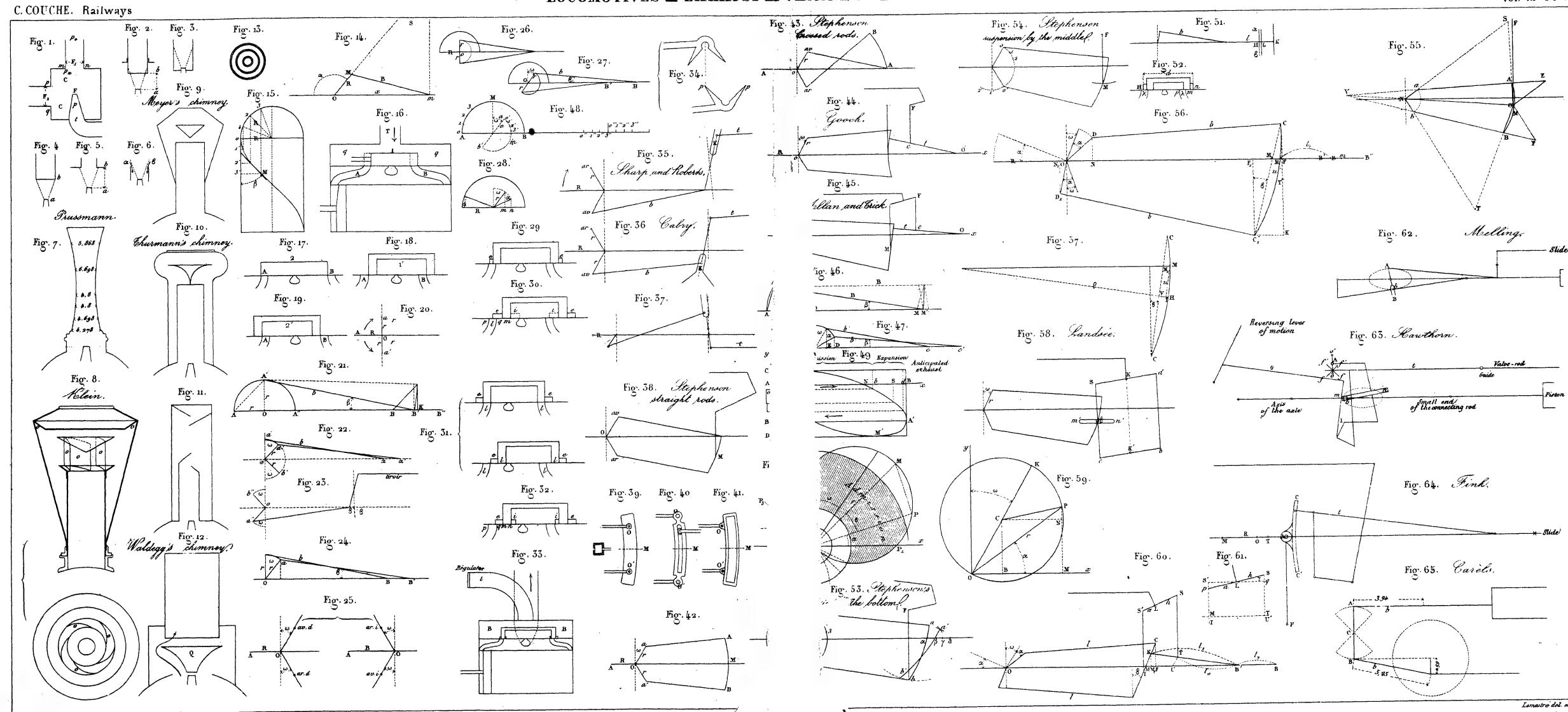




# LOCOMOTIVES — EXHAUST — CHIMNEYS — DISTRIBUTION.

Vol. III Pl. V.

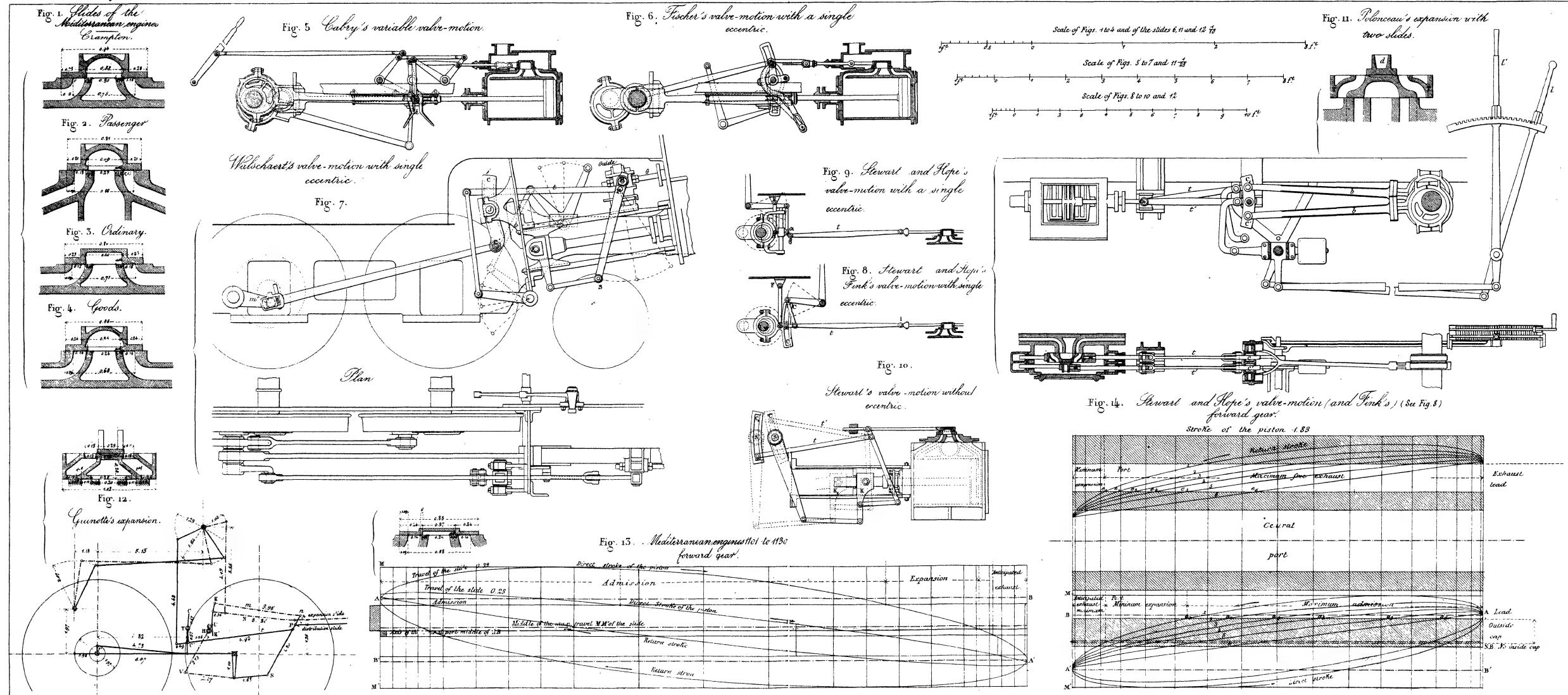
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## LOCOMOTIVES. — DIFFERENT VALVE-MOTIONS.

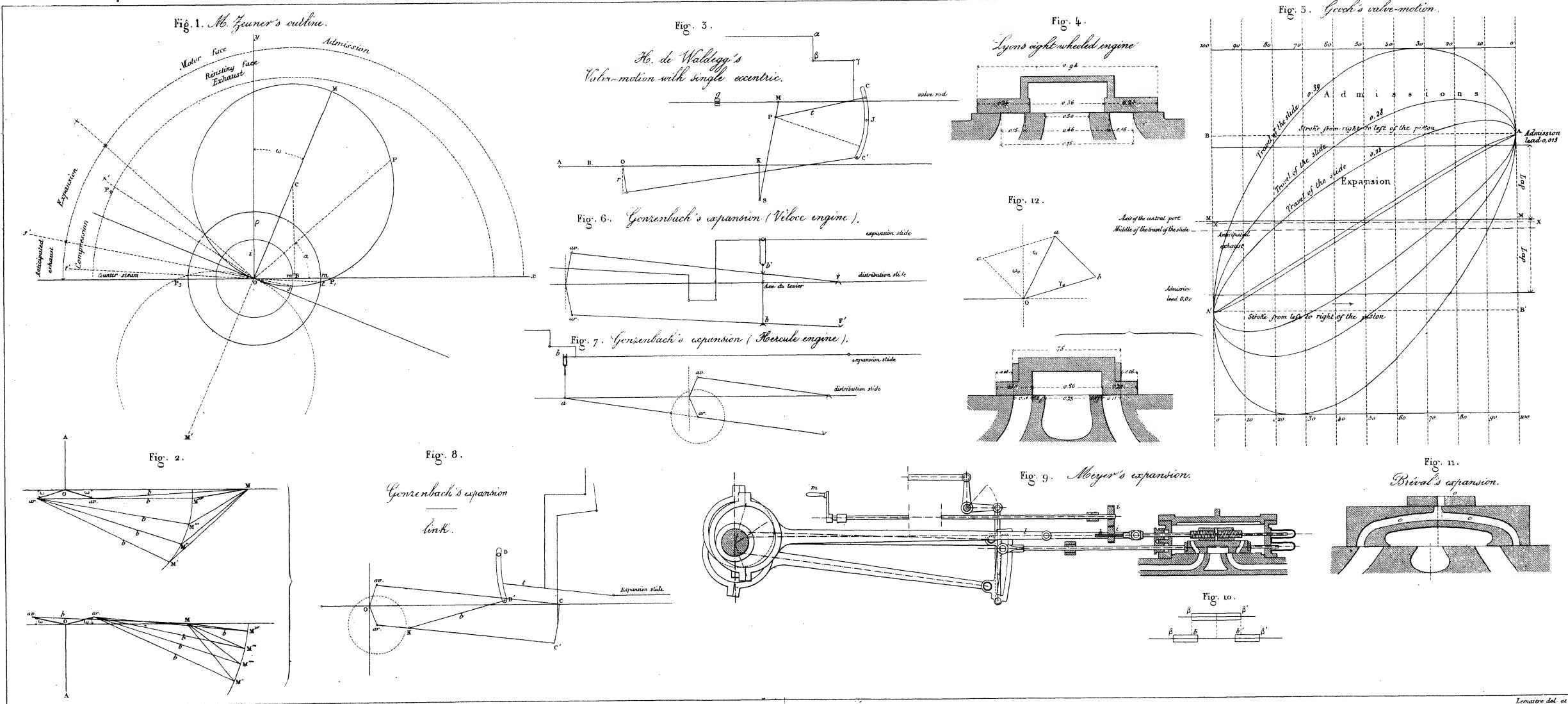




LOCOMOTIVES. — DIFFERENT VALVE-MOTIONS

Vol. III. Pl VII

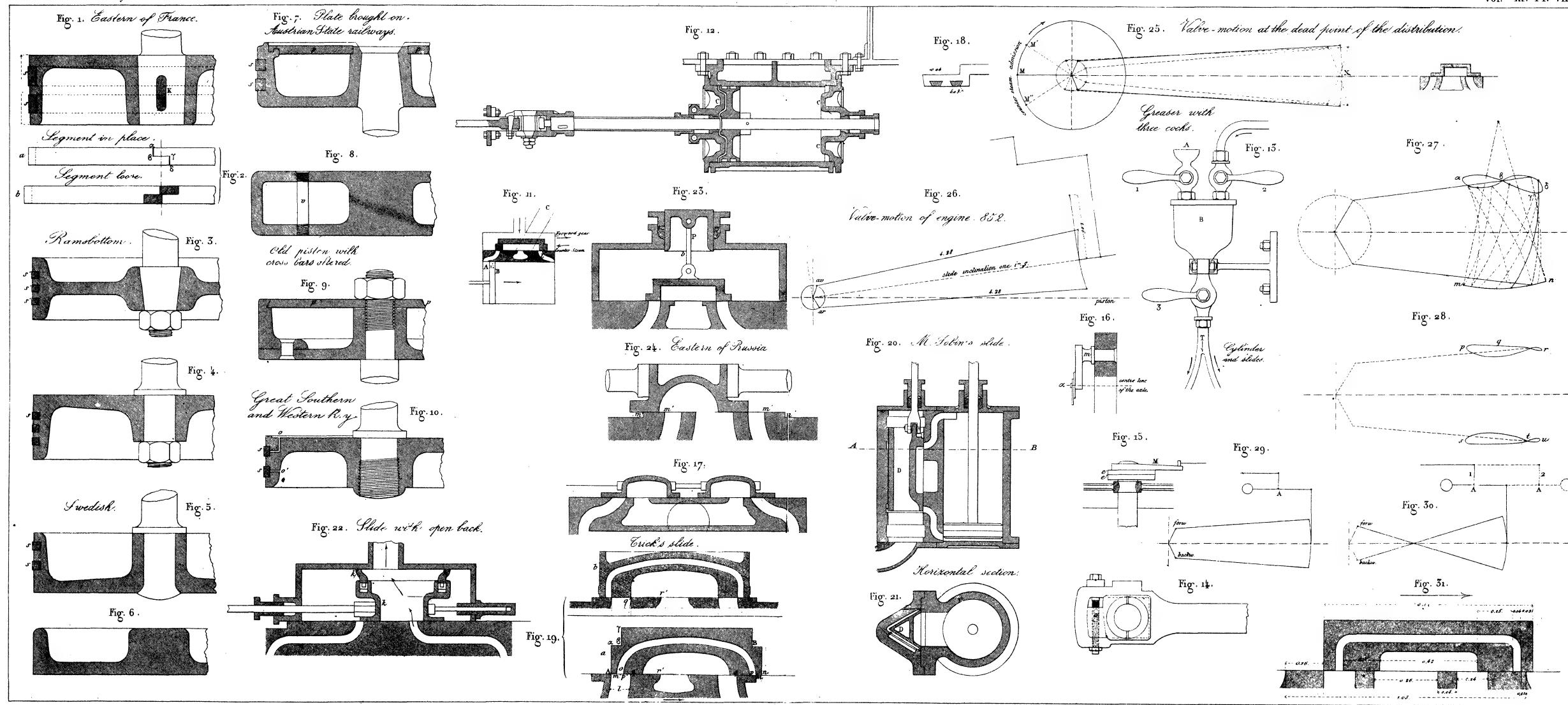
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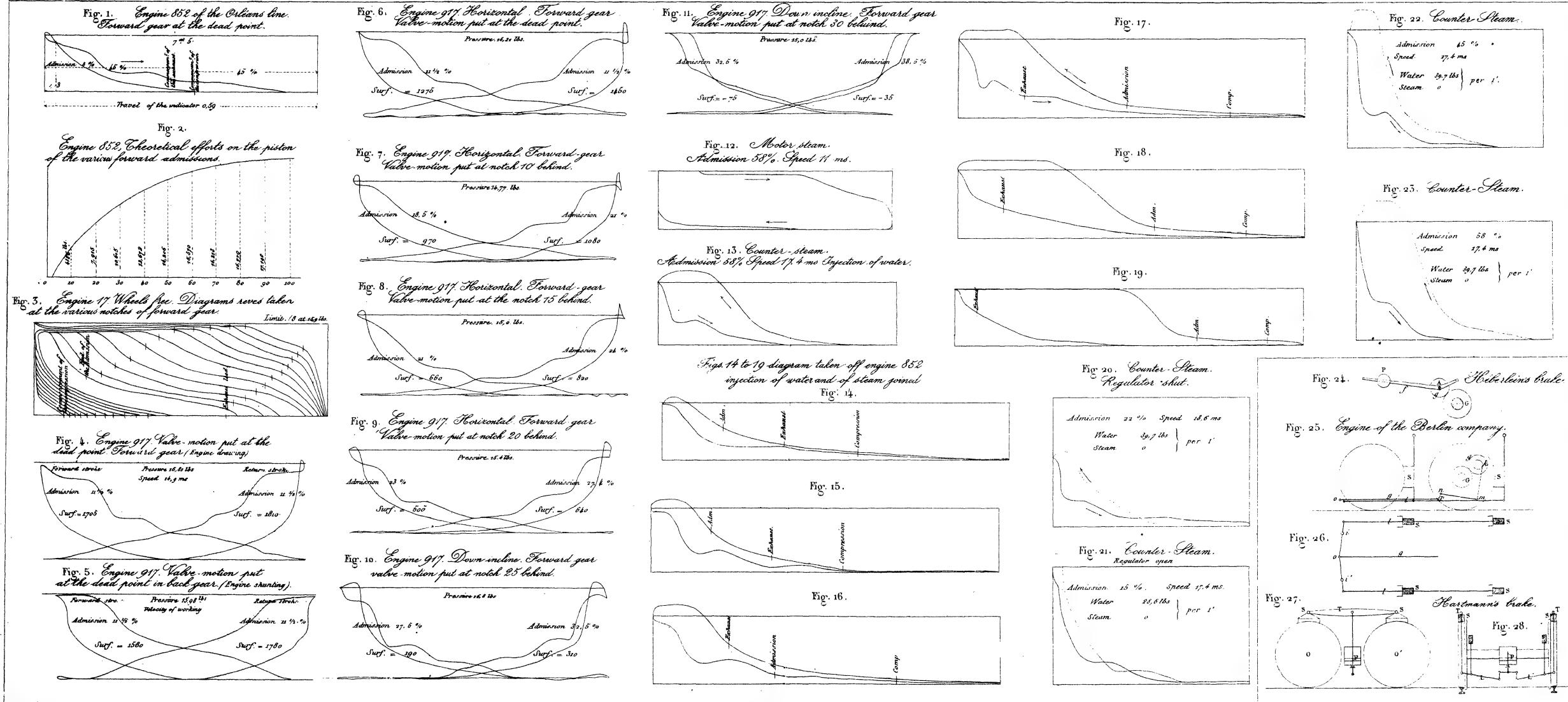
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## LOCOMOTIVES — SOME DETAILS OF THE MACHINERY.

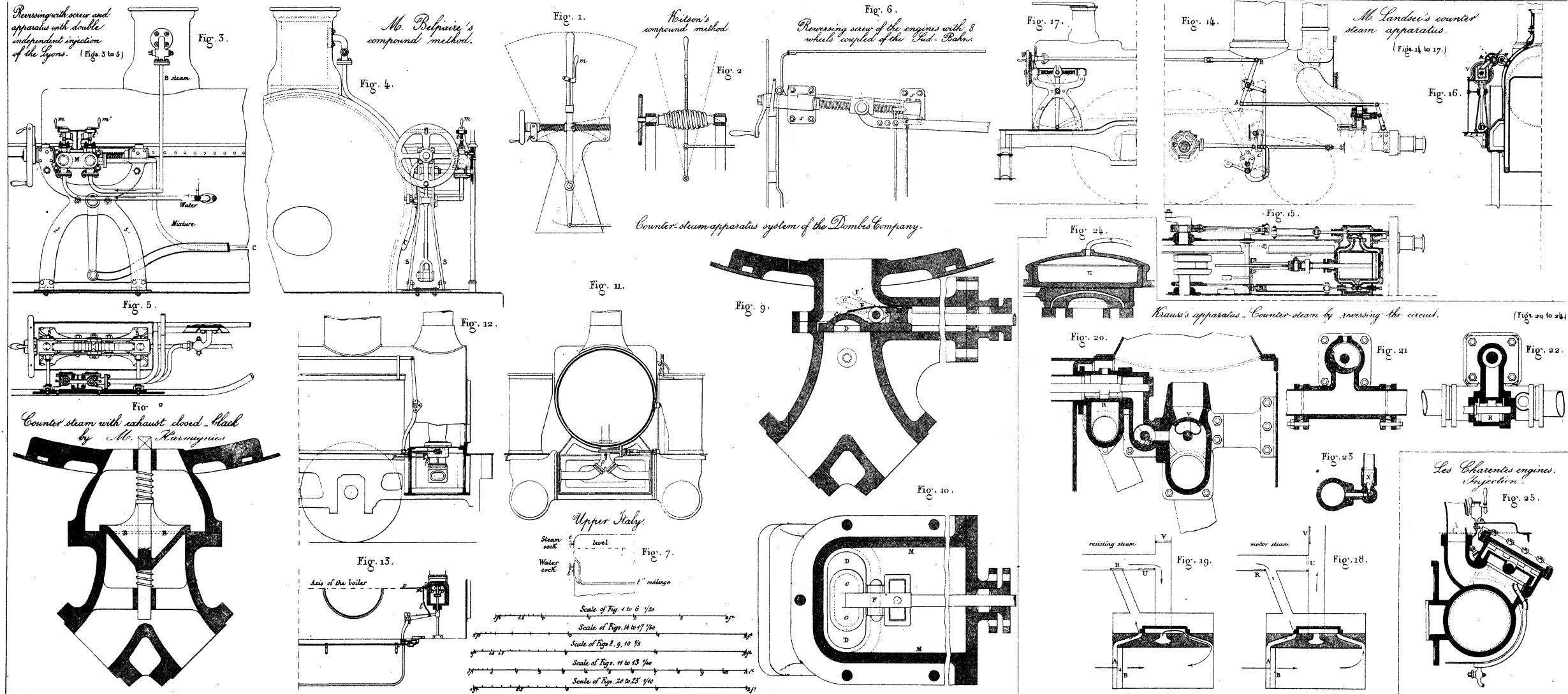






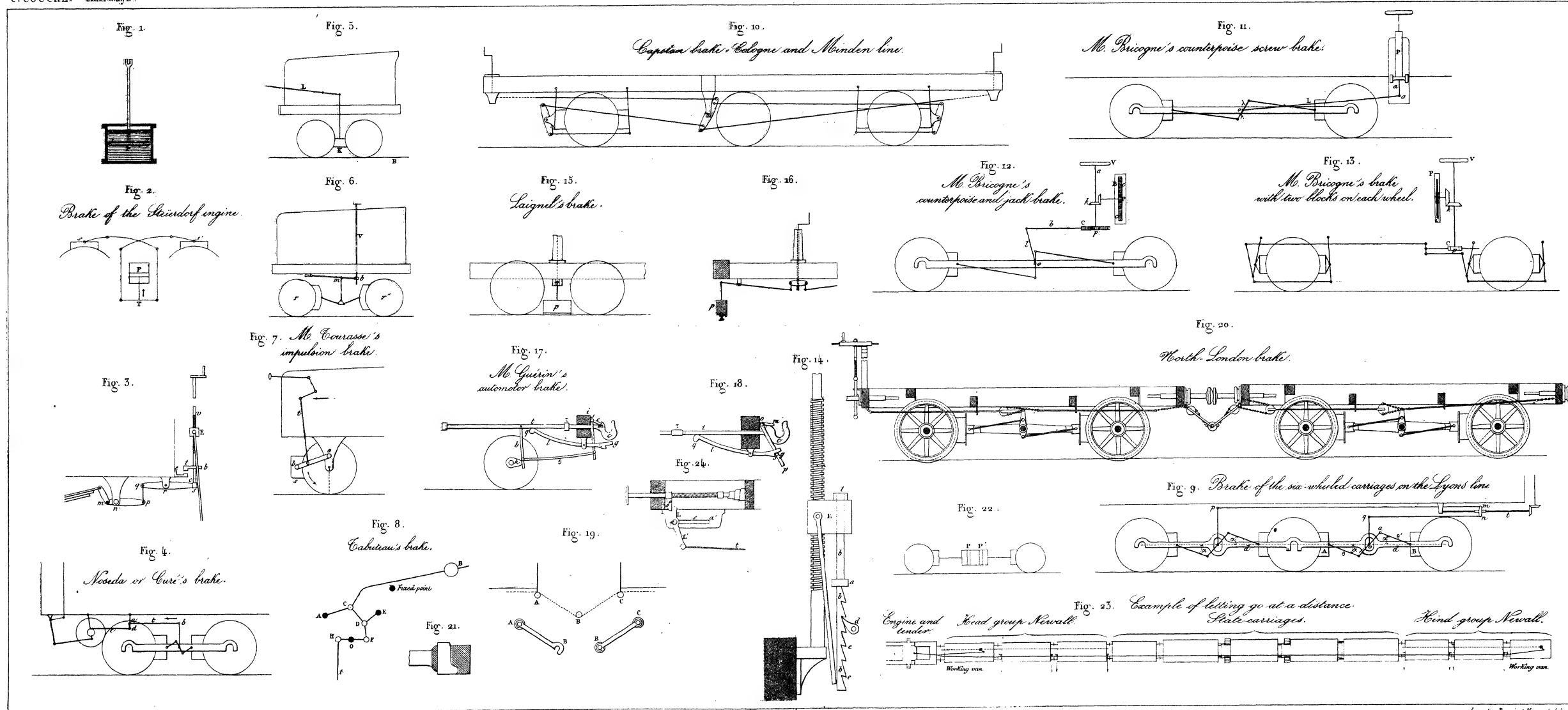


## MEANS OF STOPPING - USE OF STEAM - REVERSING THE VALVE-MOTION - INJECTION - LANDSÉE, KRAUSS SYSTEMS.

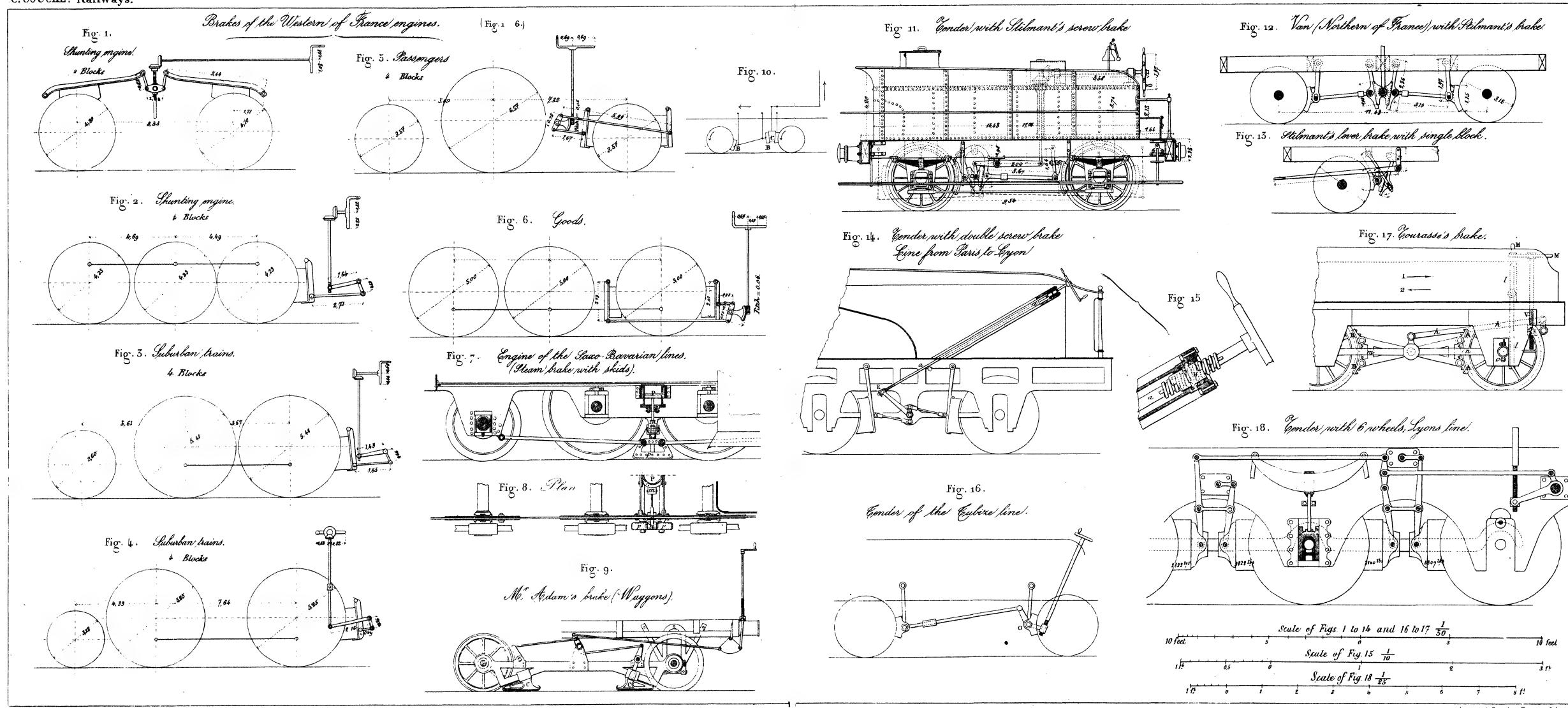




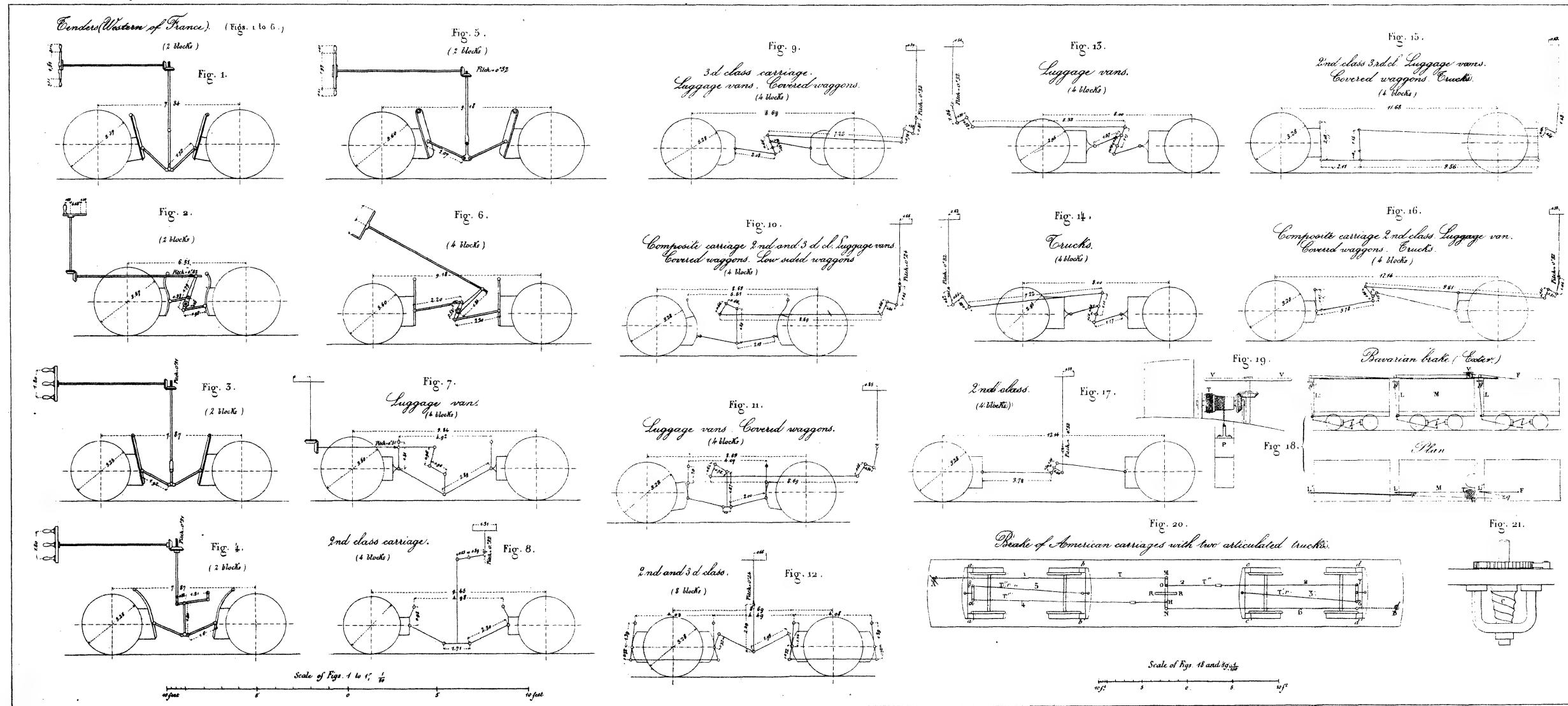
## DIVERS BRAKES





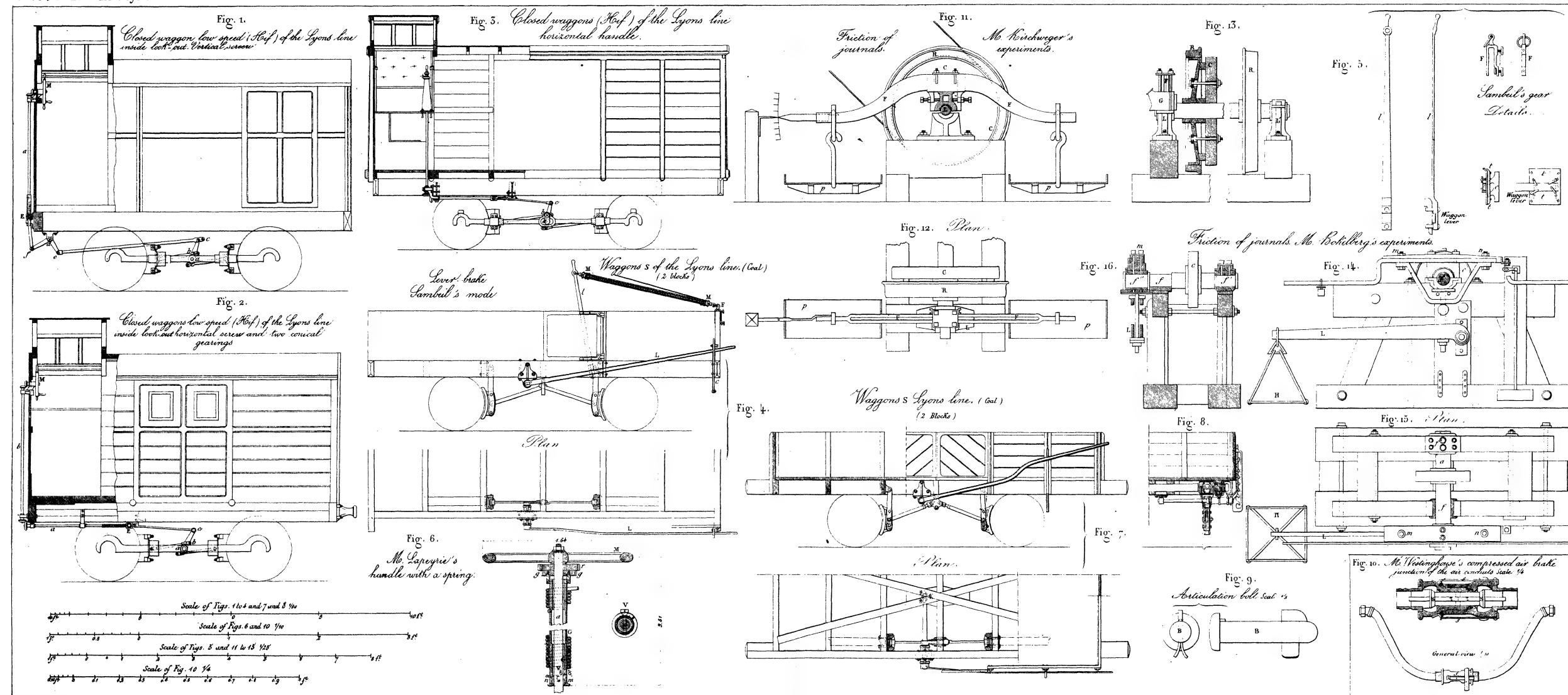








## VARIOUS BRAKES — RESISTANCE OF TRAINS

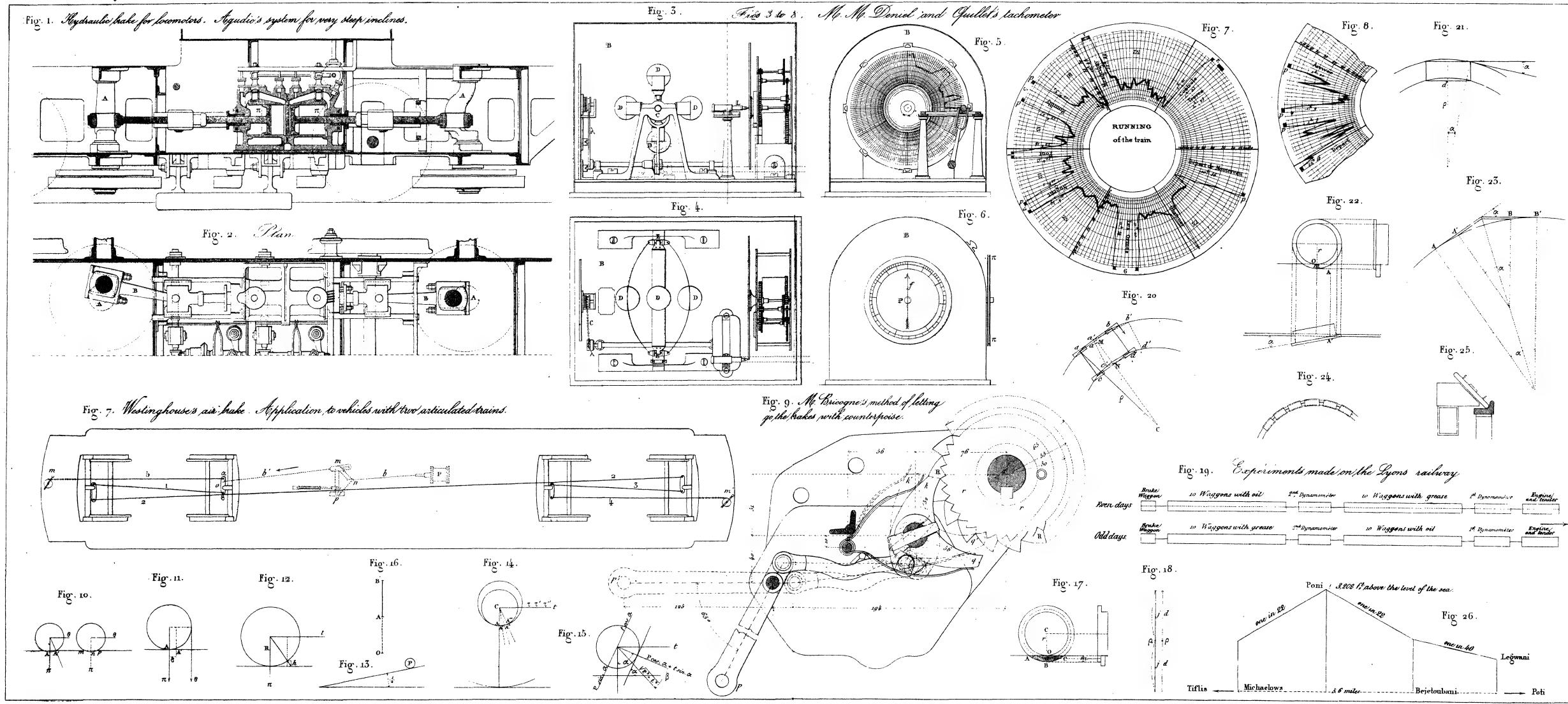




## **VARIOUS BRAKES - TACHOMETER - RESISTANCE OF TRAINS - INFLUENCE OF CURVES**

C. COUCHE. Railways.

VOL III. PL. XV.

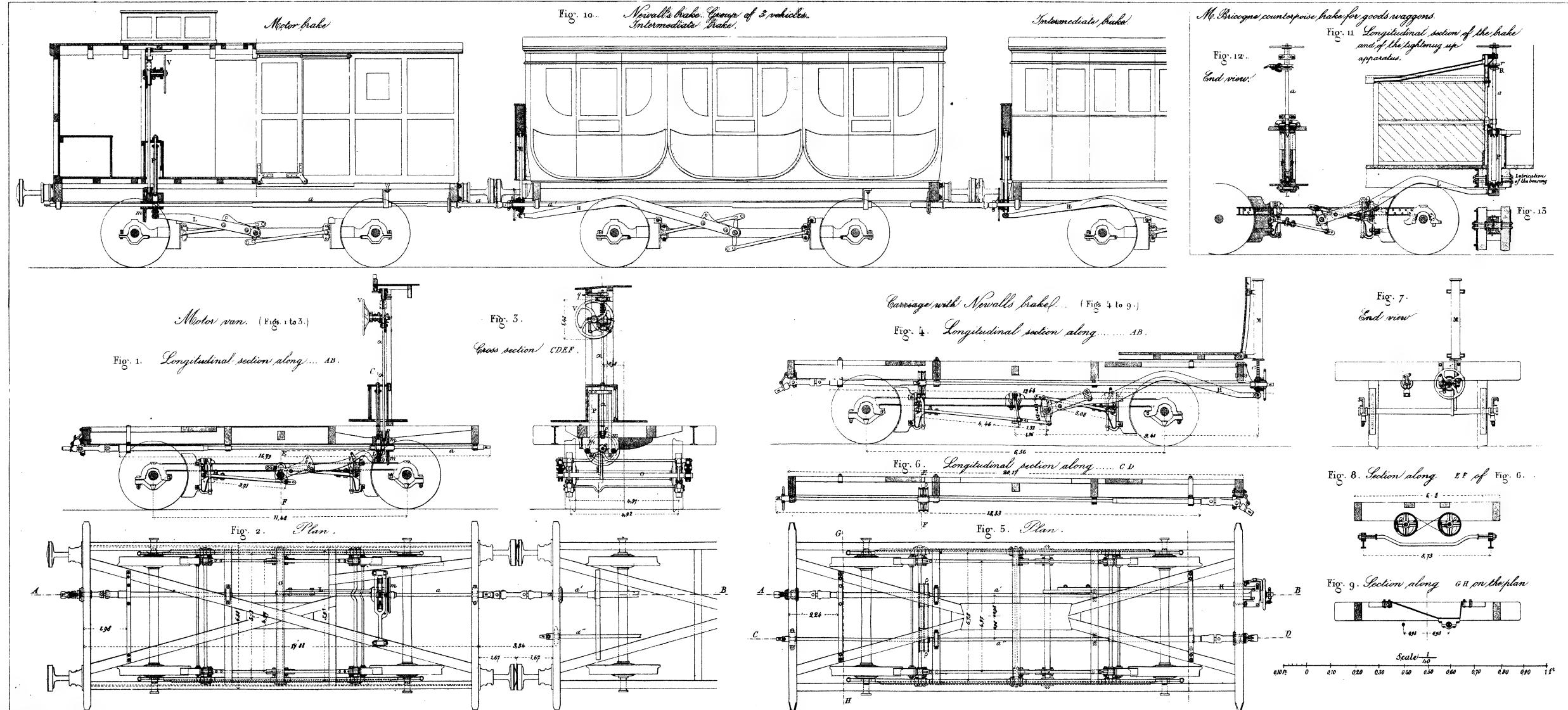




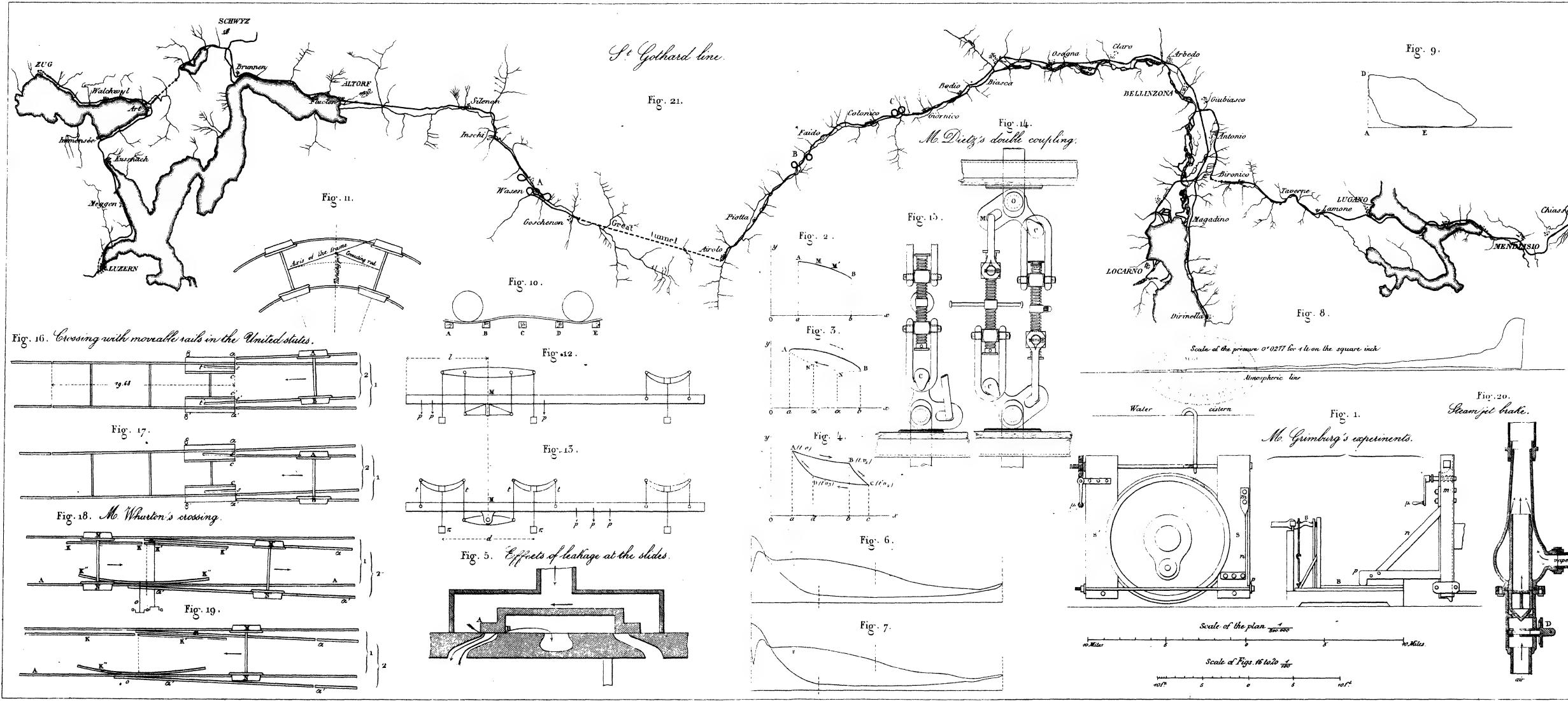
## BRAKE WITH COUNTERPOISE AND TRANSMISSION OF THE NORTHERN OF FRANCE.—NEWALL'S BRAKE.

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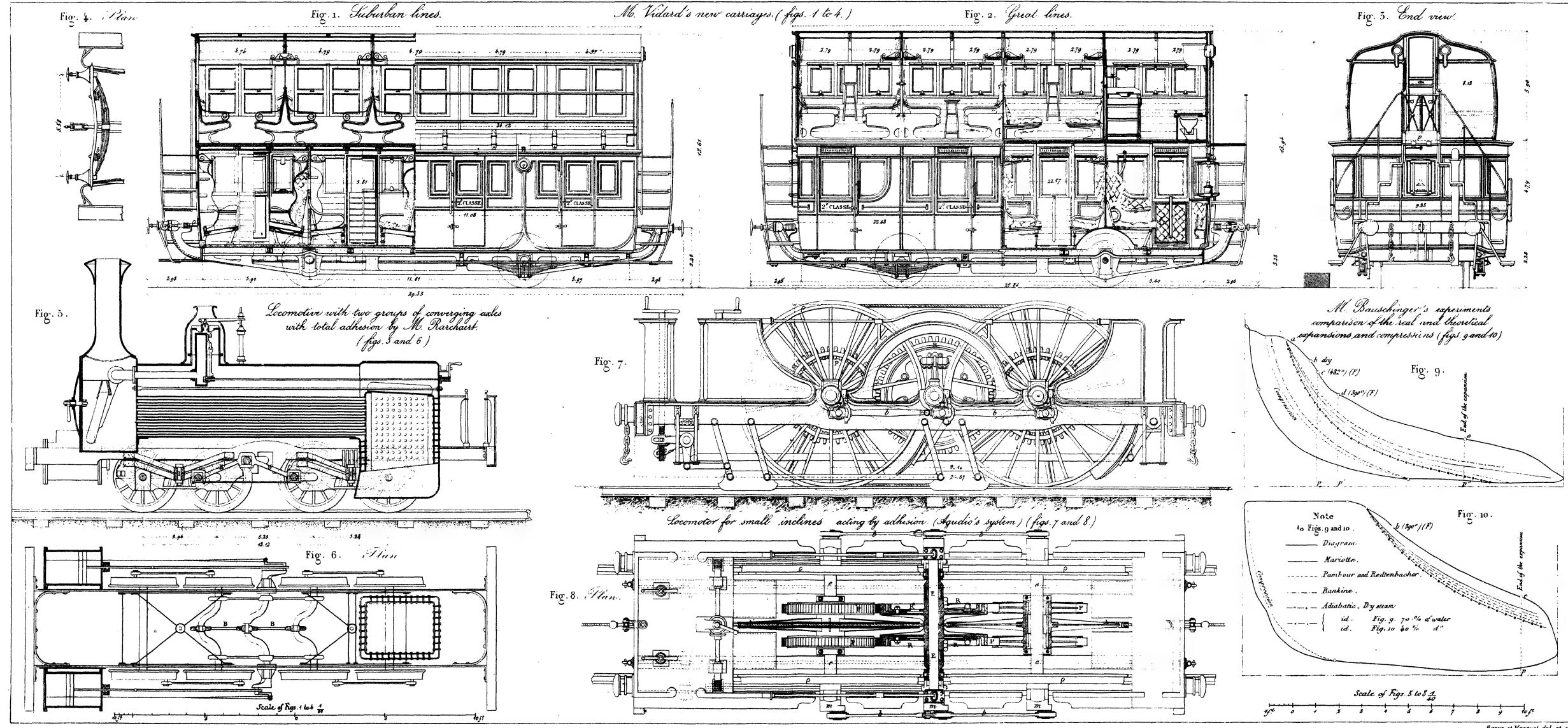
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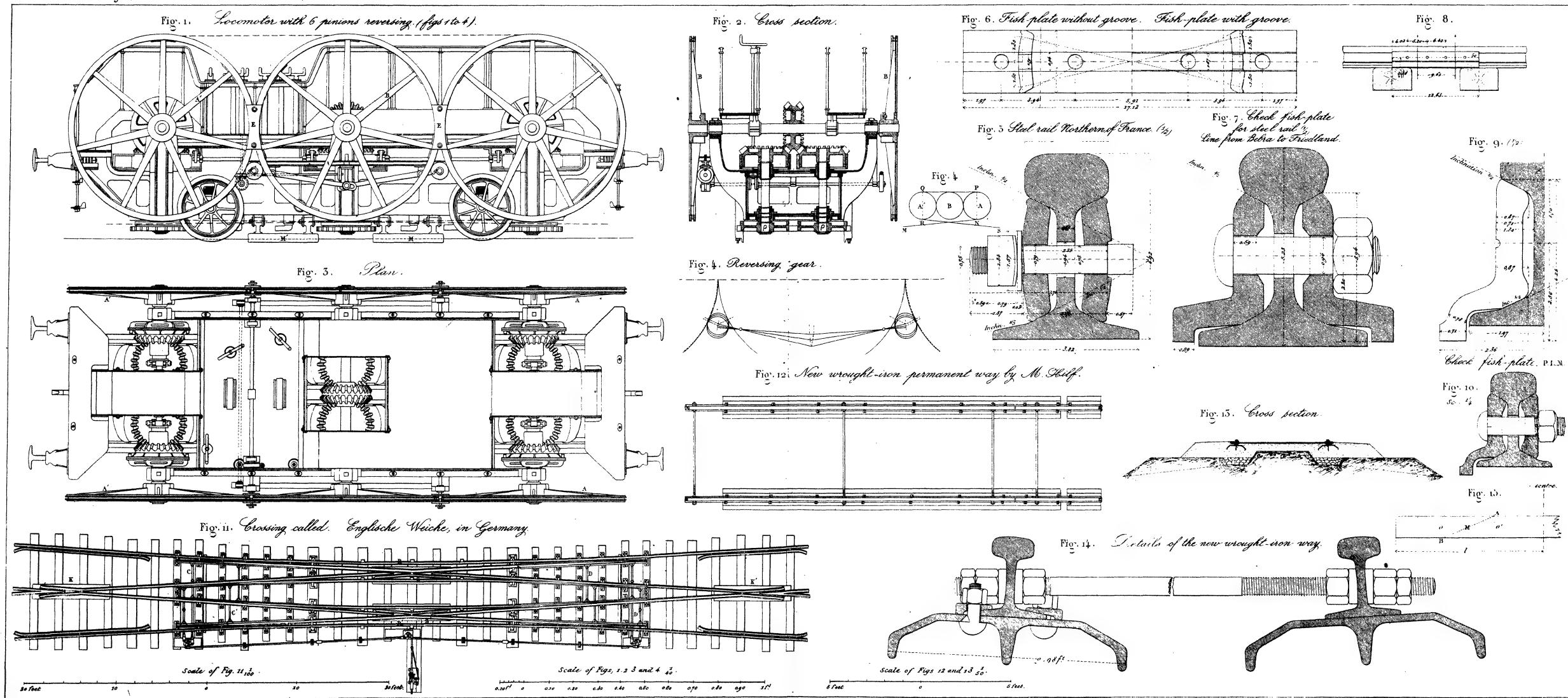




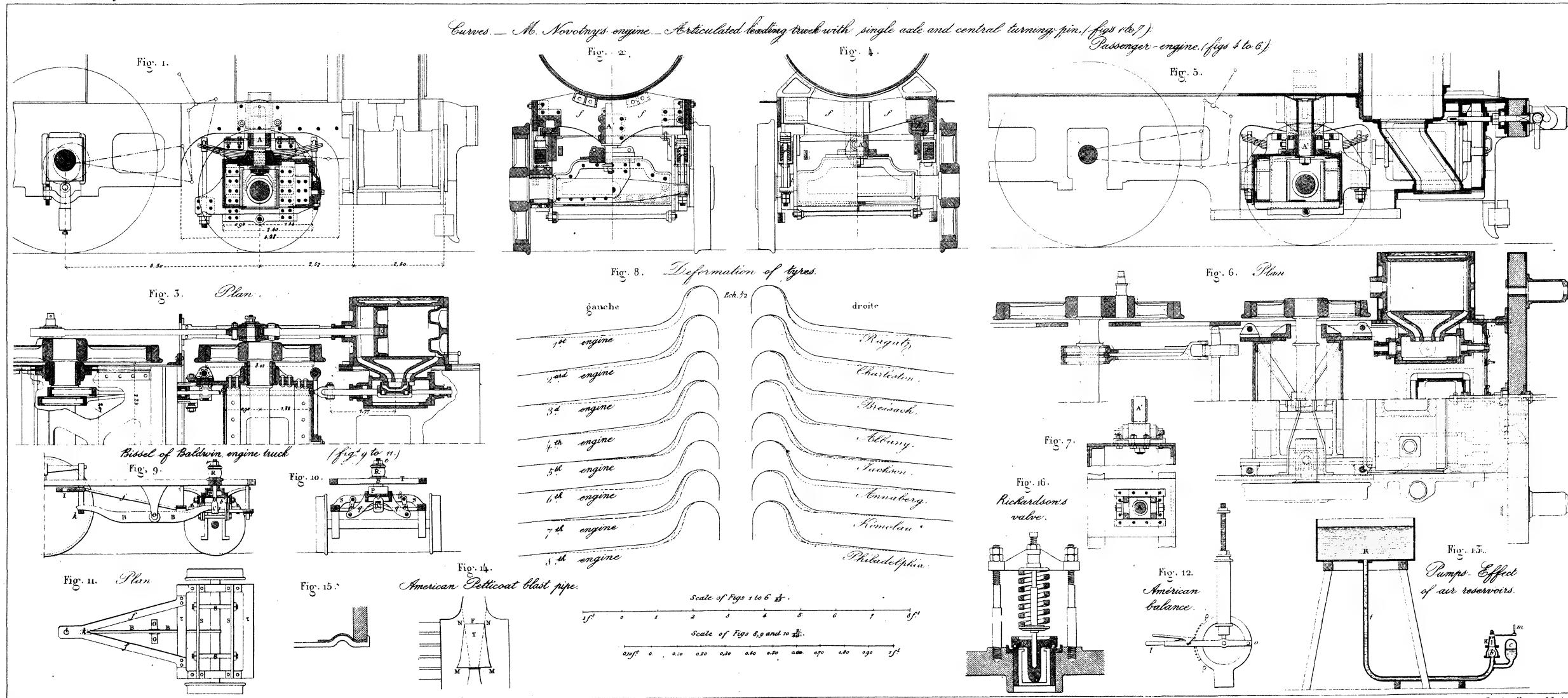




C. COUCHE. Railways

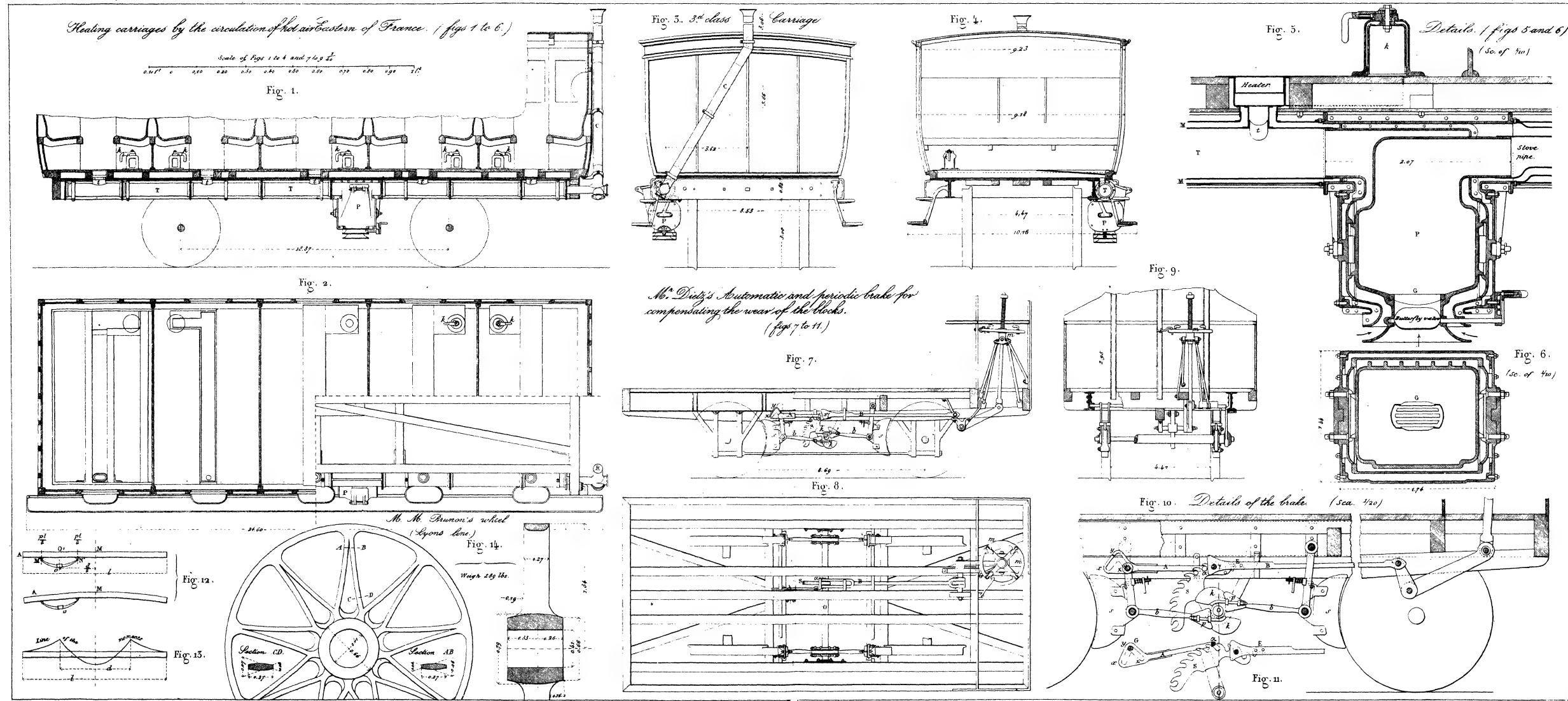








## SUPPLEMENT





LES  
**CHEMINS DE FER**  
EN  
**AMÉRIQUE**

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F PONTZEN

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ET

TOME SECOND

## CONSTRUCTION

## EXPLORATION

## SPÉCIMENS DES PLANCHES

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DUNOD, ÉDITEUR

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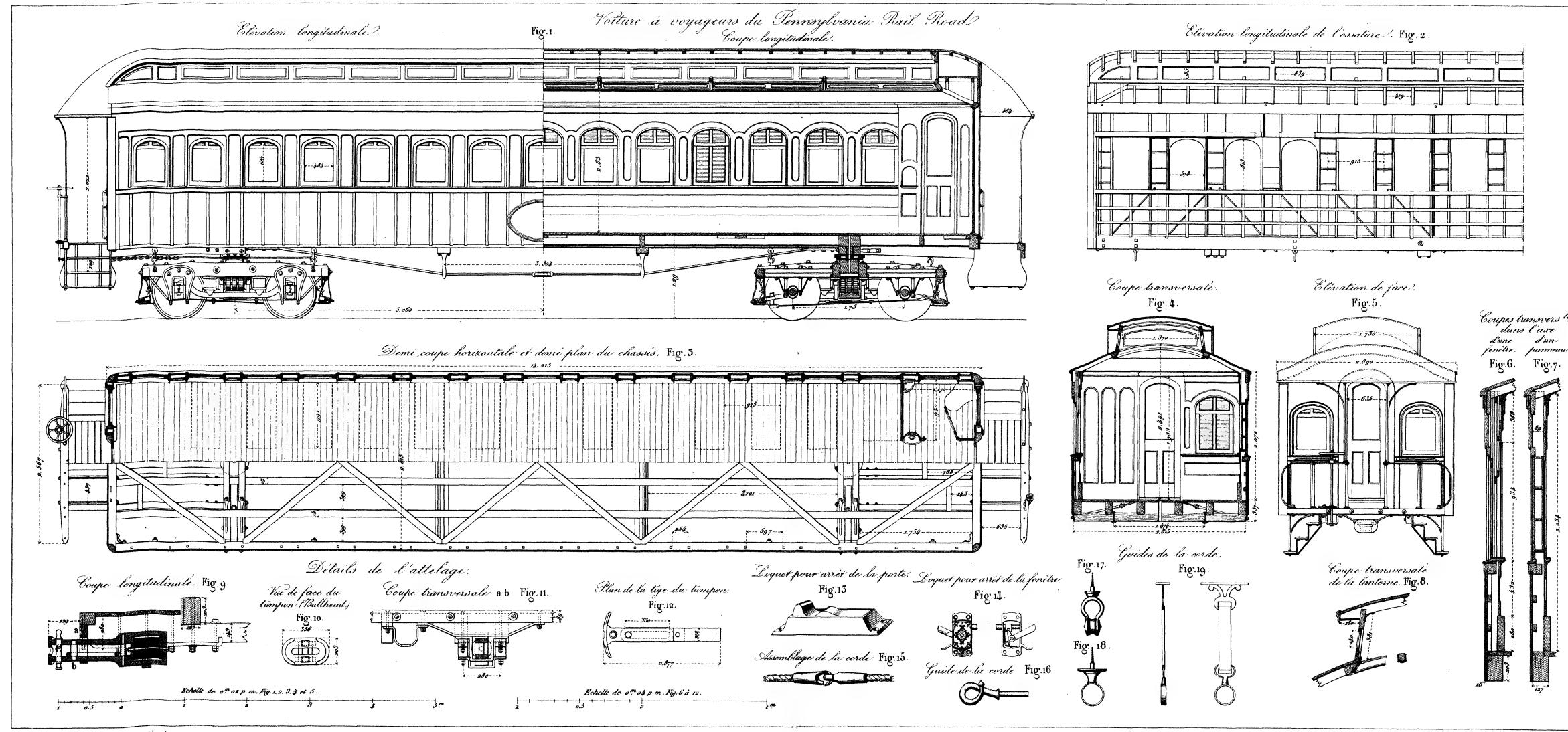
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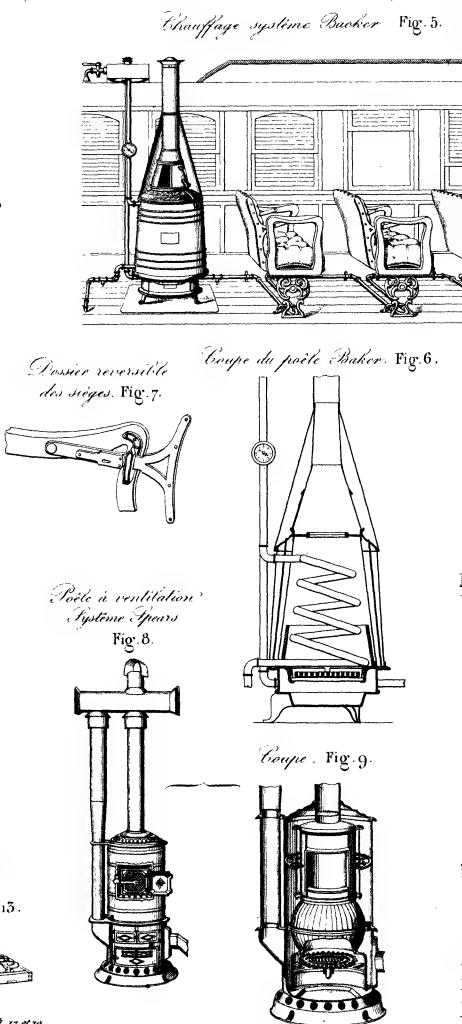
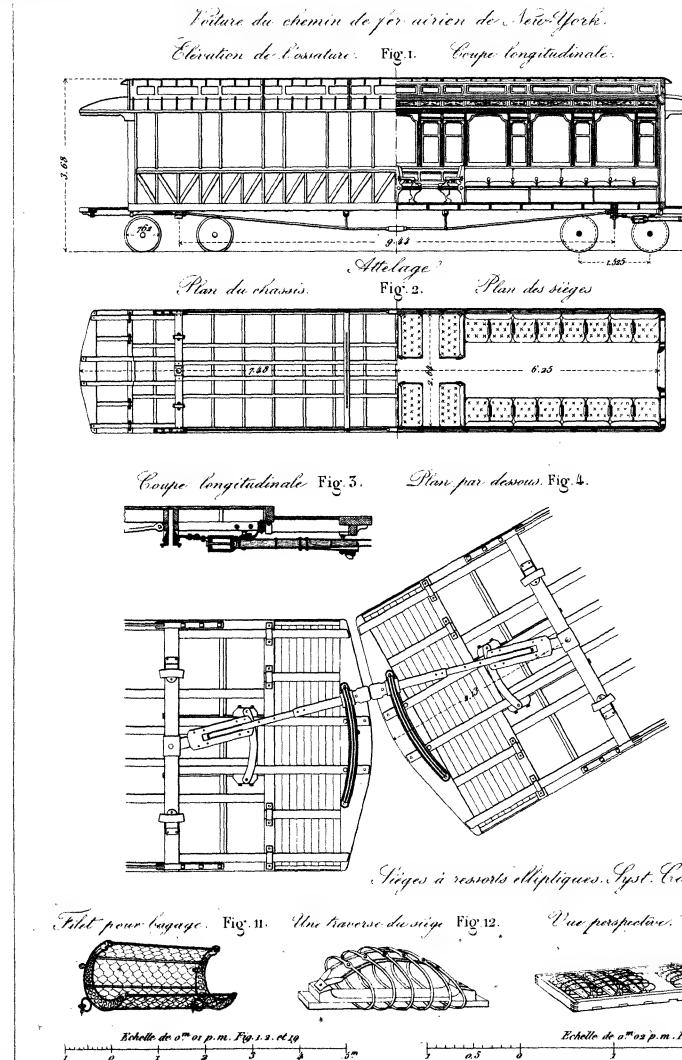


## VOITURES A VOYAGEURS.



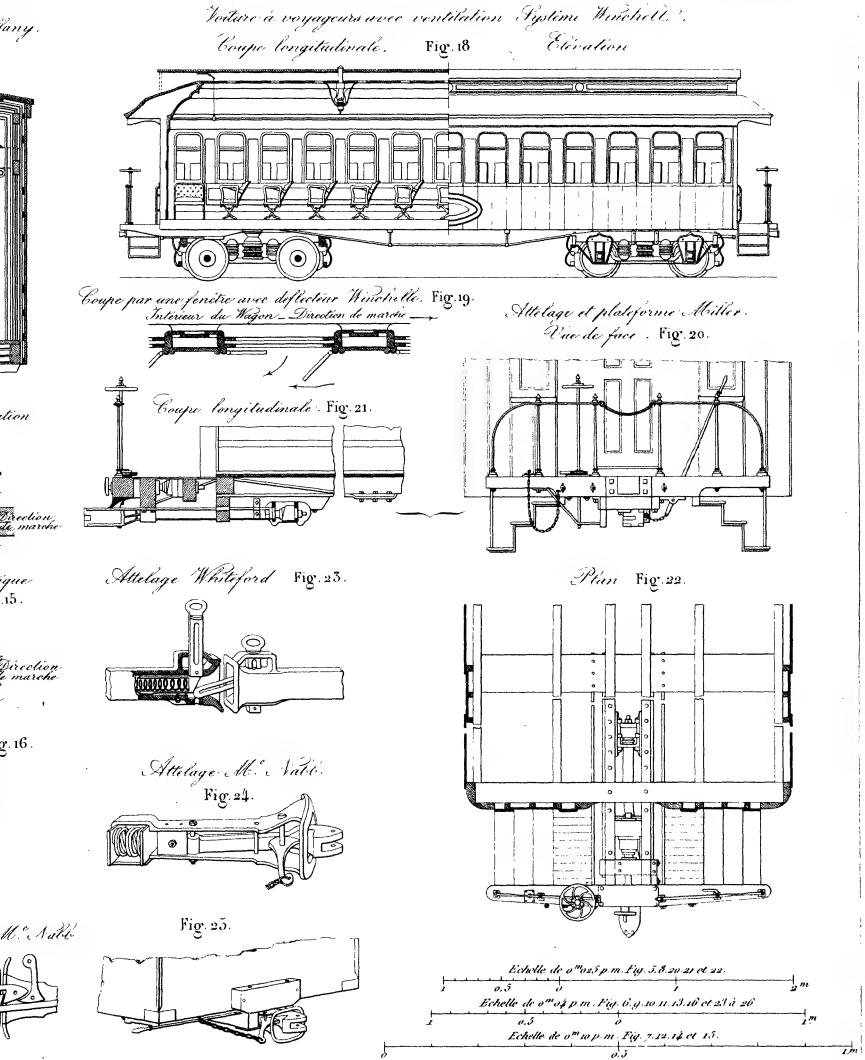
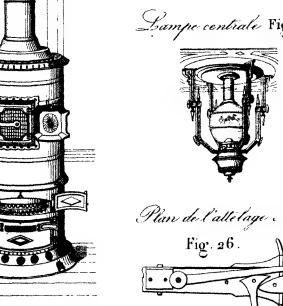
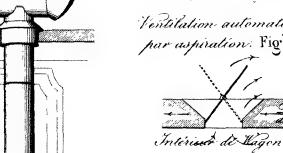
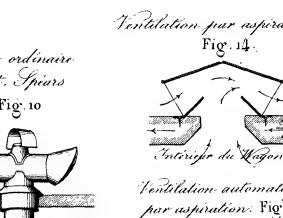
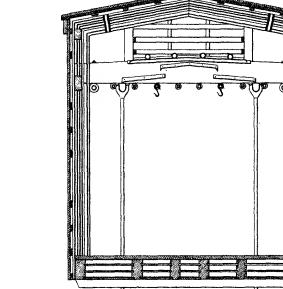


VOITURES. CHAUFFAGE.



FILATION.. ATTELAGES.

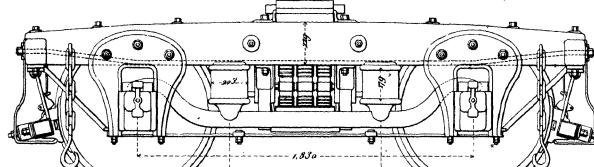
Wagon réfrigérant. Syst. Effany.  
Coupé transversal. Fig. 17



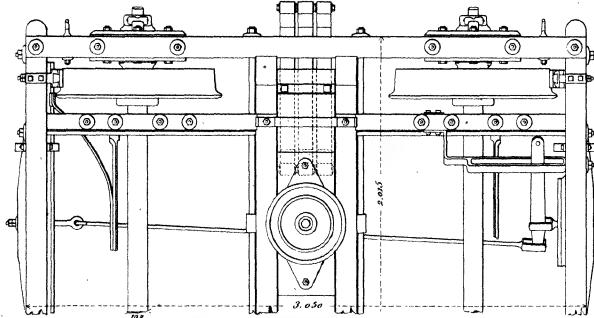


TRUCKS DE VOITURES À VOYAGEURS.

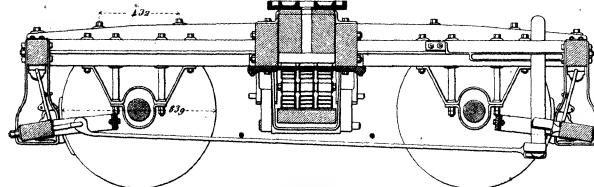
Truck à quatre roues d'un Wagon à voyageurs du Pennsylvania R. R.  
Elevation. Fig. 1.



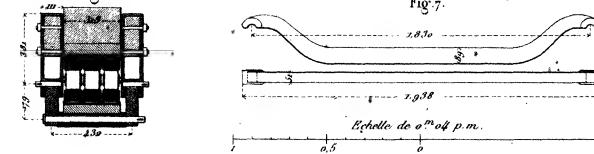
Plan. Fig. 4.



Coupe longitudinale. Fig. 5.



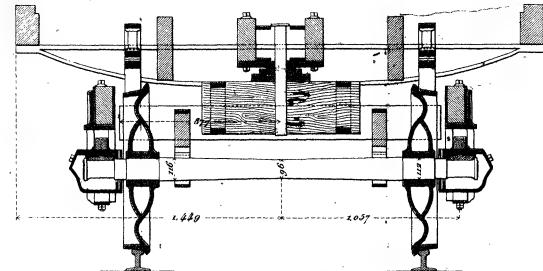
Coupe à travers le ressort elliptique.  
Fig. 6.



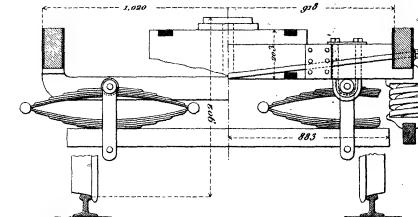
Balanceur répartissant les charges.  
Fig. 7.

Echelle de 0<sup>m</sup> 0<sup>f</sup> 0<sup>m</sup> p.m.

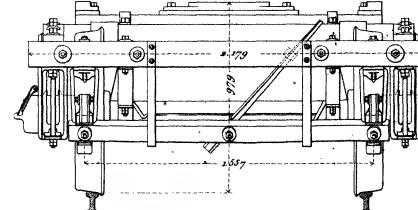
Truck à six roues d'un Wagon à lits du Louisville et Nashville Rail Road.  
Coupé transversale par l'axe de l'essieu central. Fig. 9.



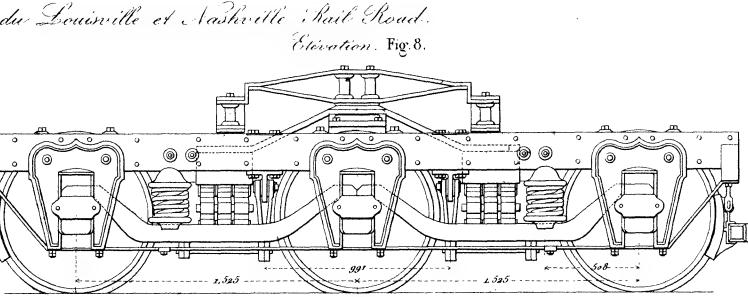
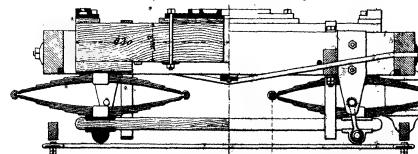
Coupe transversale. Fig. 10.



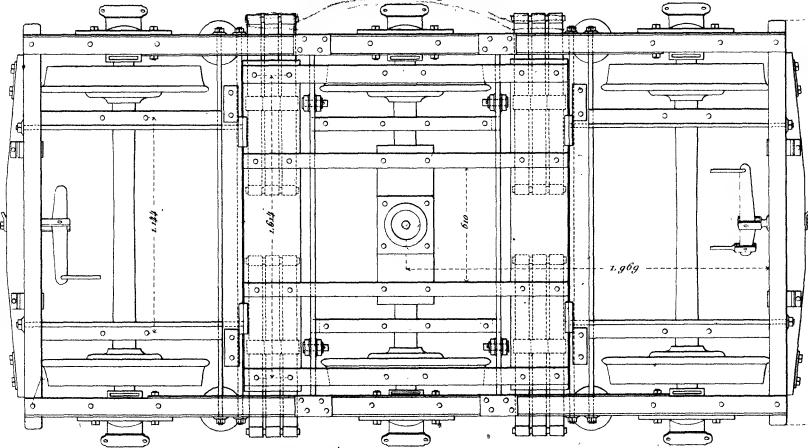
Vue de face. Fig. 2.



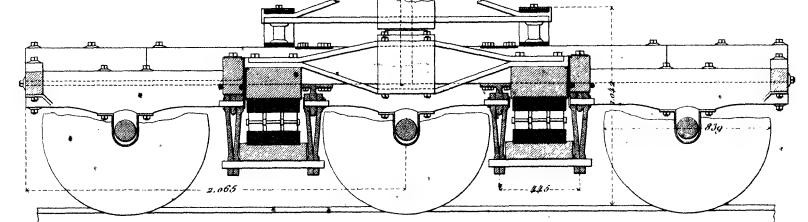
Coupe transversale. Fig. 3.



Plan. Fig. 11.

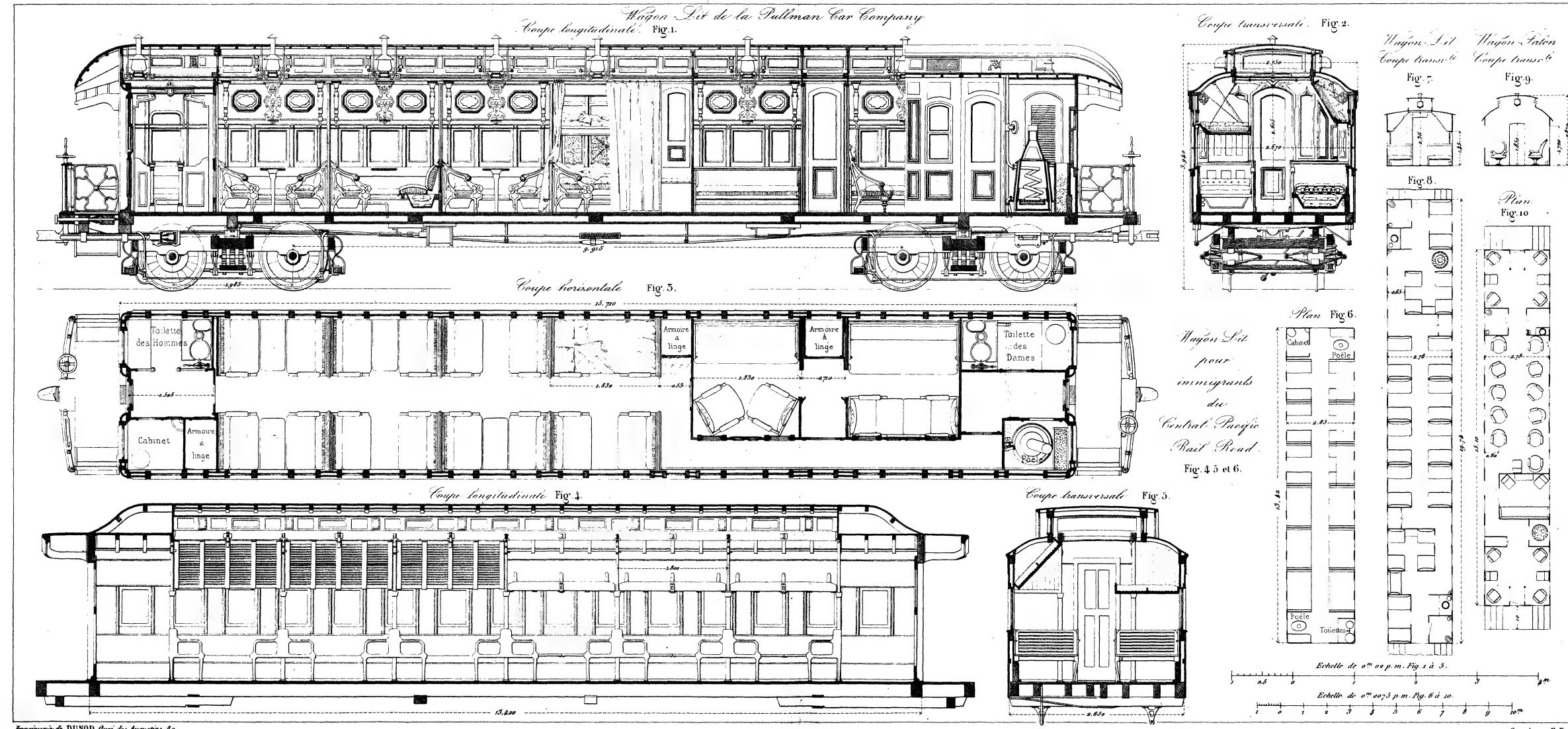


Coupe longitudinale. Fig. 12.

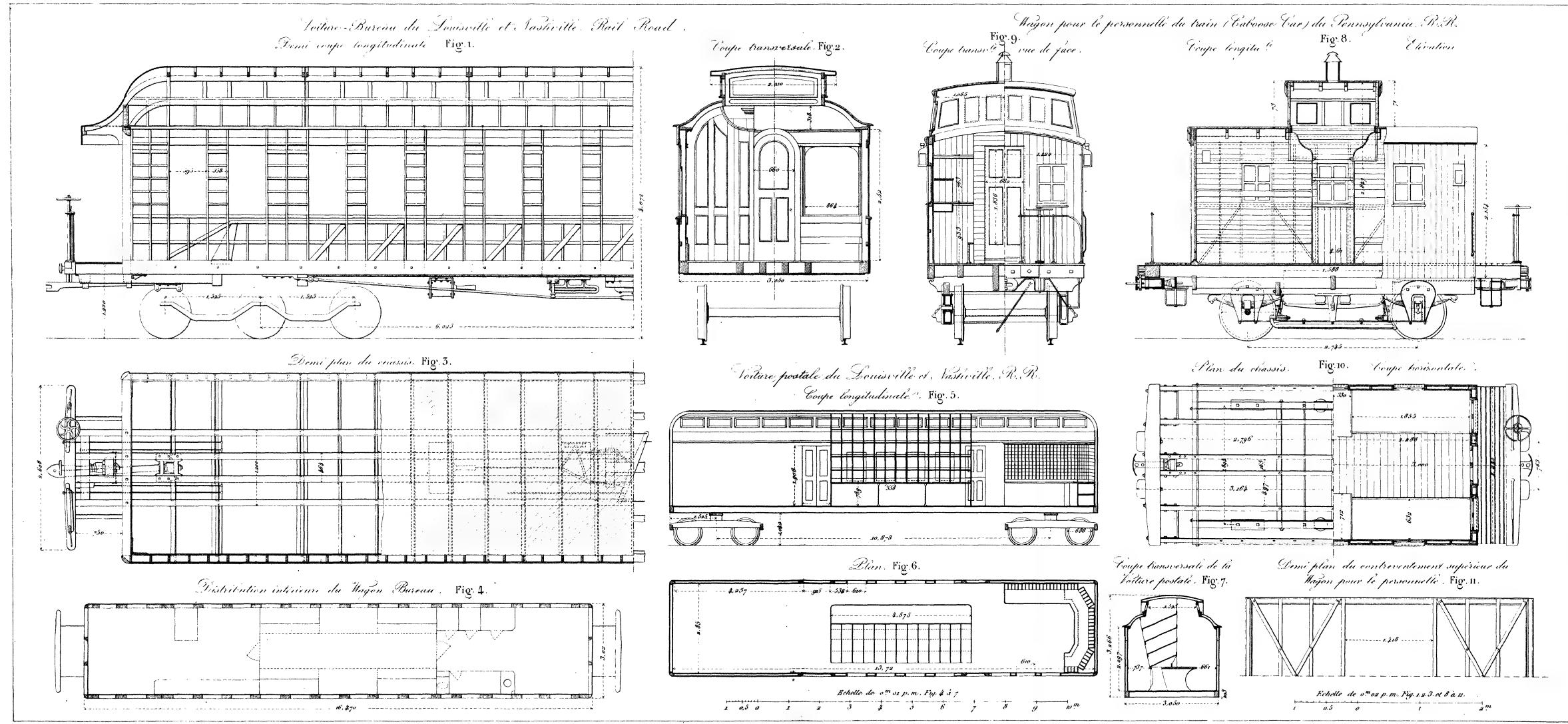




WAGONS-LITS ET WAGON-SALON.

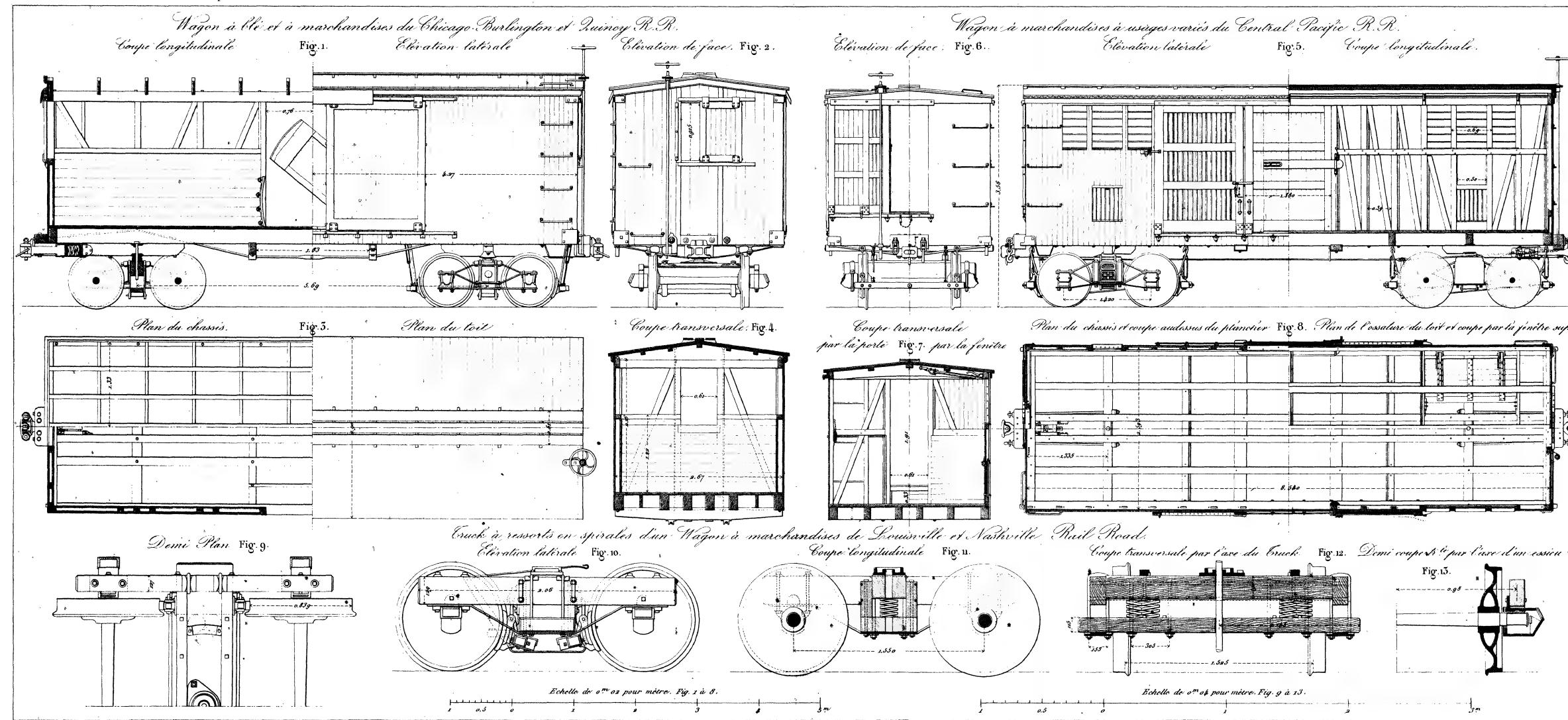








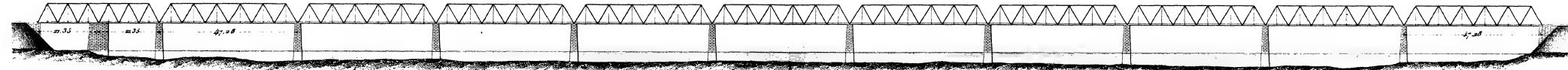
## WAGONS COUVERTS À MARCHANDISES.



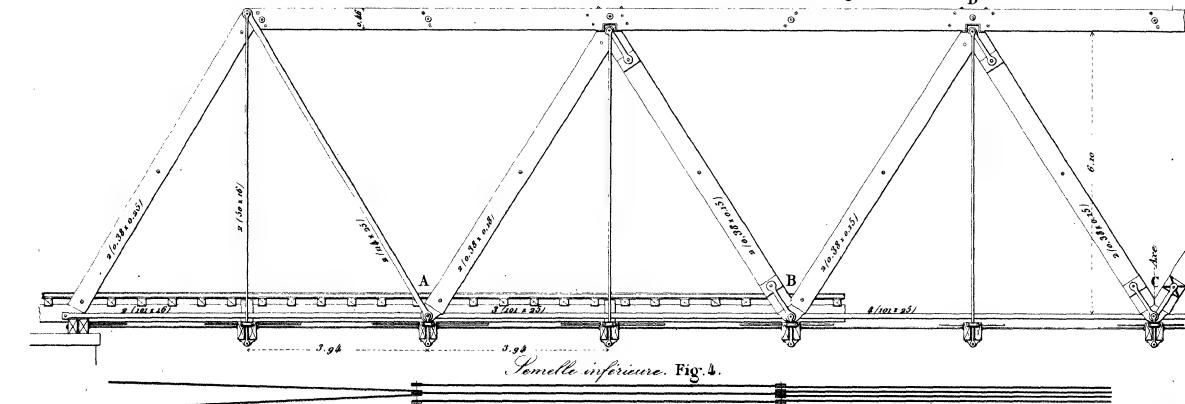


PONT DU SYSTÈME TRIANGULAIRE EN BOIS ET FER. — SEMELLES EN FONTE.

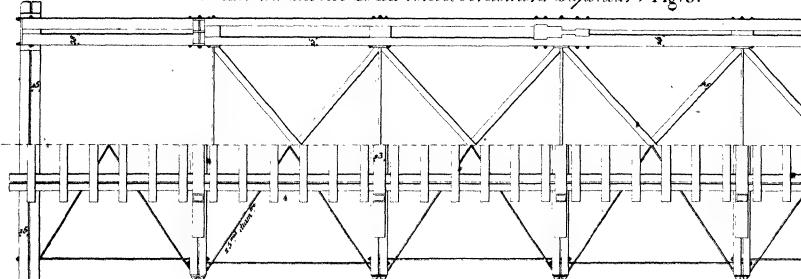
Pont sur le Tennessee à Decatur (Alabama) sur le Memphis et Charleston Rail-Road.  
Elevation générale. Fig. 1.



Elevation d'une demi-travée. Fig. 2.



Plan du tablier et du contreventement supérieur. Fig. 5.



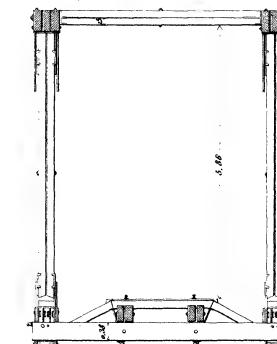
Echelle de 0<sup>m</sup> 00083 p.m. Fig. 1.

Echelle de 0<sup>m</sup> 029 p.m. Fig. 6, 7 et 8.

Echelle de 0<sup>m</sup> 01 p.m. Fig. 2, 3, 4 et 5.

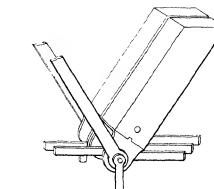
Echelle de 0<sup>m</sup> 029 p.m. Fig. 10 à 16.

Coupe transversale. Fig. 3.

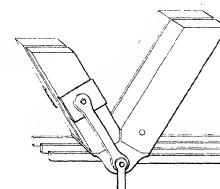


Détails d'assemblage avec la semelle inférieure.

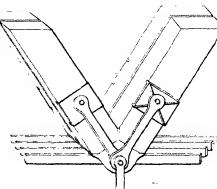
Articulation en A  
Fig. 6.



Articulation en B  
Fig. 7.



Articulation en C  
Fig. 8.

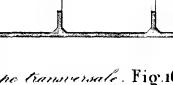


Détails de la semelle supérieure en fonte des Ponts du système Post  
Elevation et coupe verticale. Fig. 10.

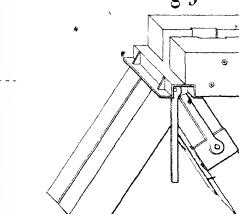


Coupe transv. Fig. 11.

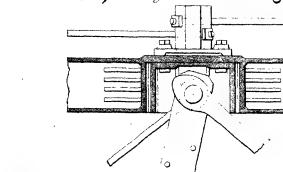
Vue par dessous et coupe horizontale. Fig. 12.



Assemblage avec la semelle supérieure en D.  
Fig. 9.

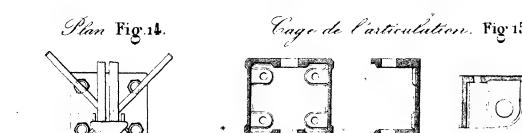


Coupe longitudinale. Fig. 13.

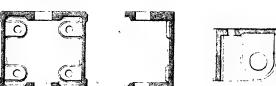


Attache des montants tirants et contreventements.

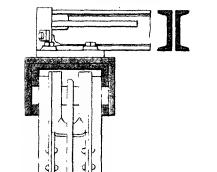
Plan Fig. 14.



Cage de l'articulation. Fig. 15.

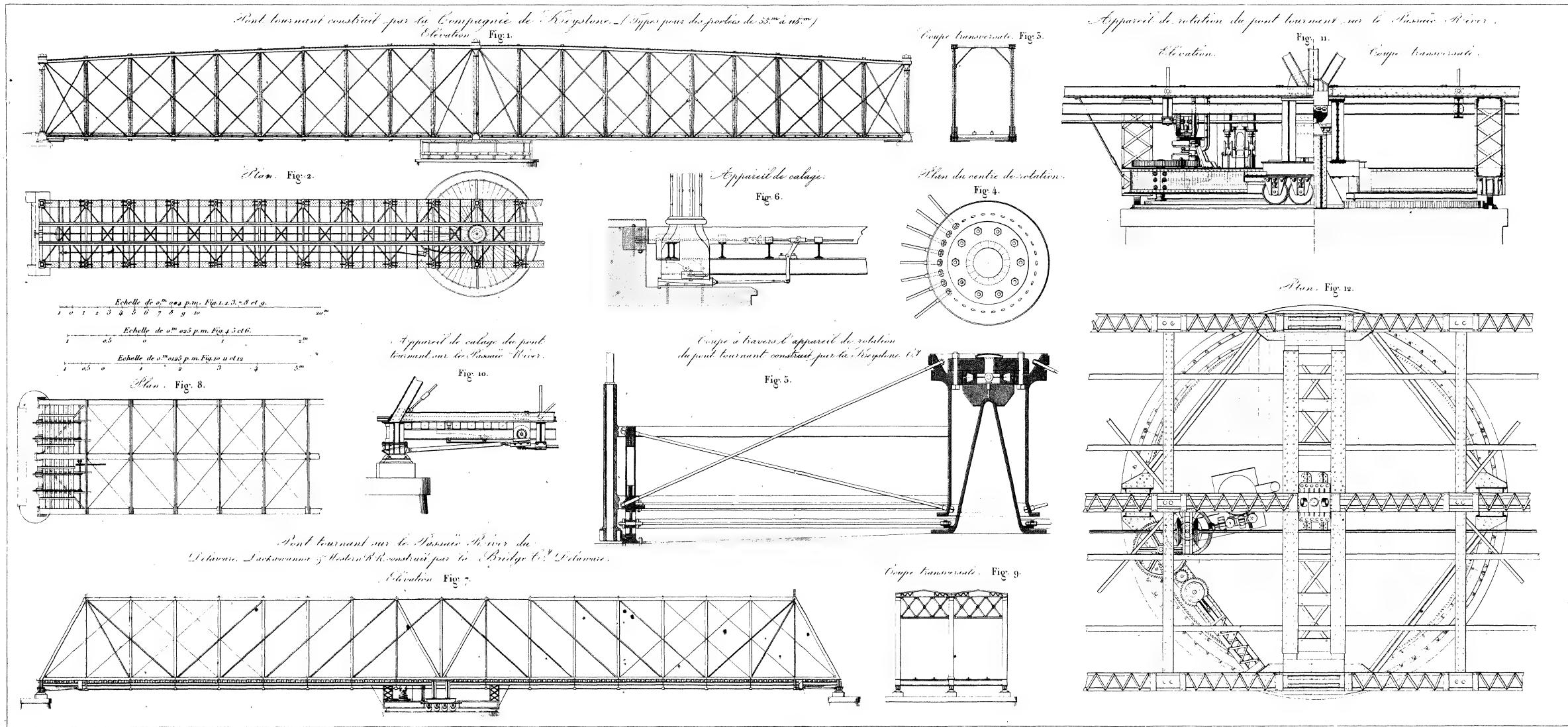


Coupe transv. Fig. 16.

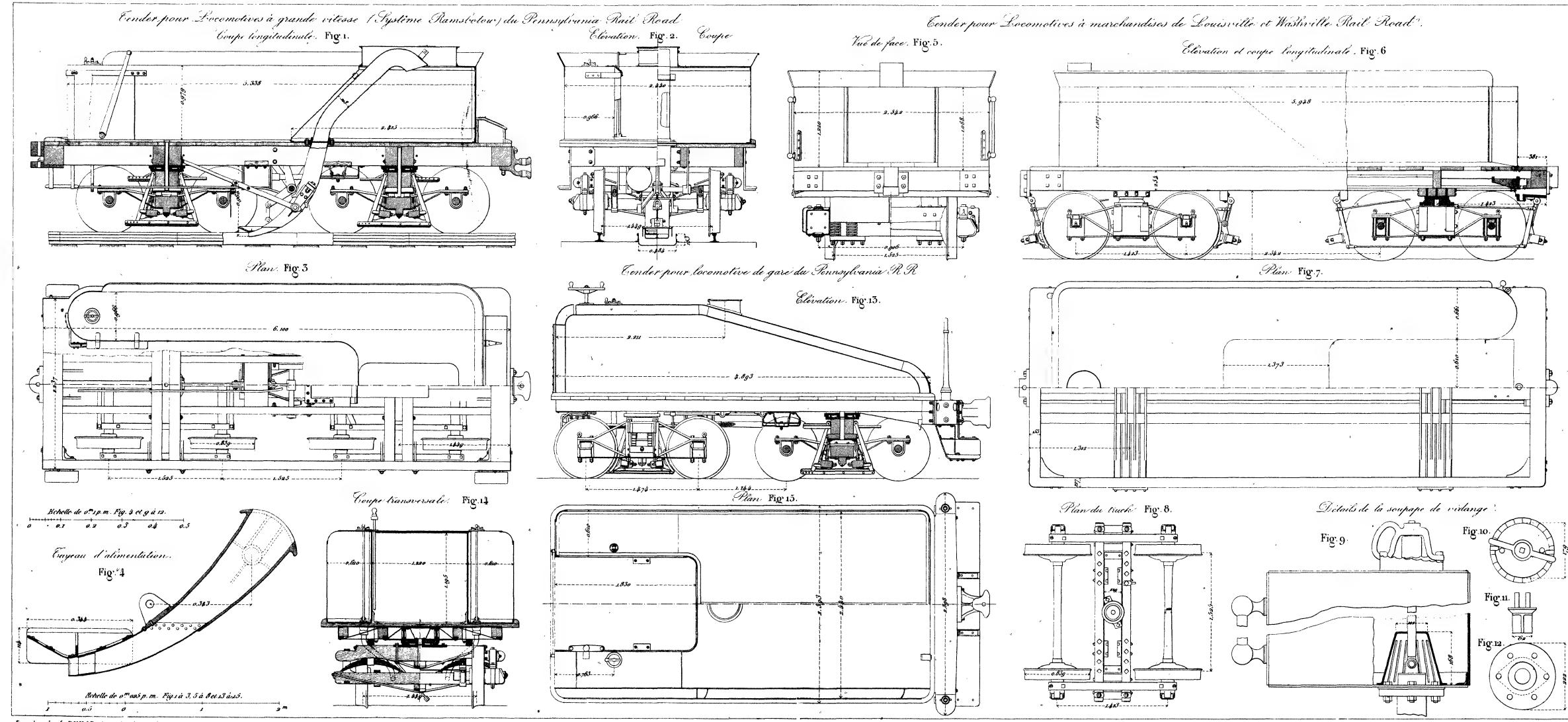




PONTS TOURNANTS.

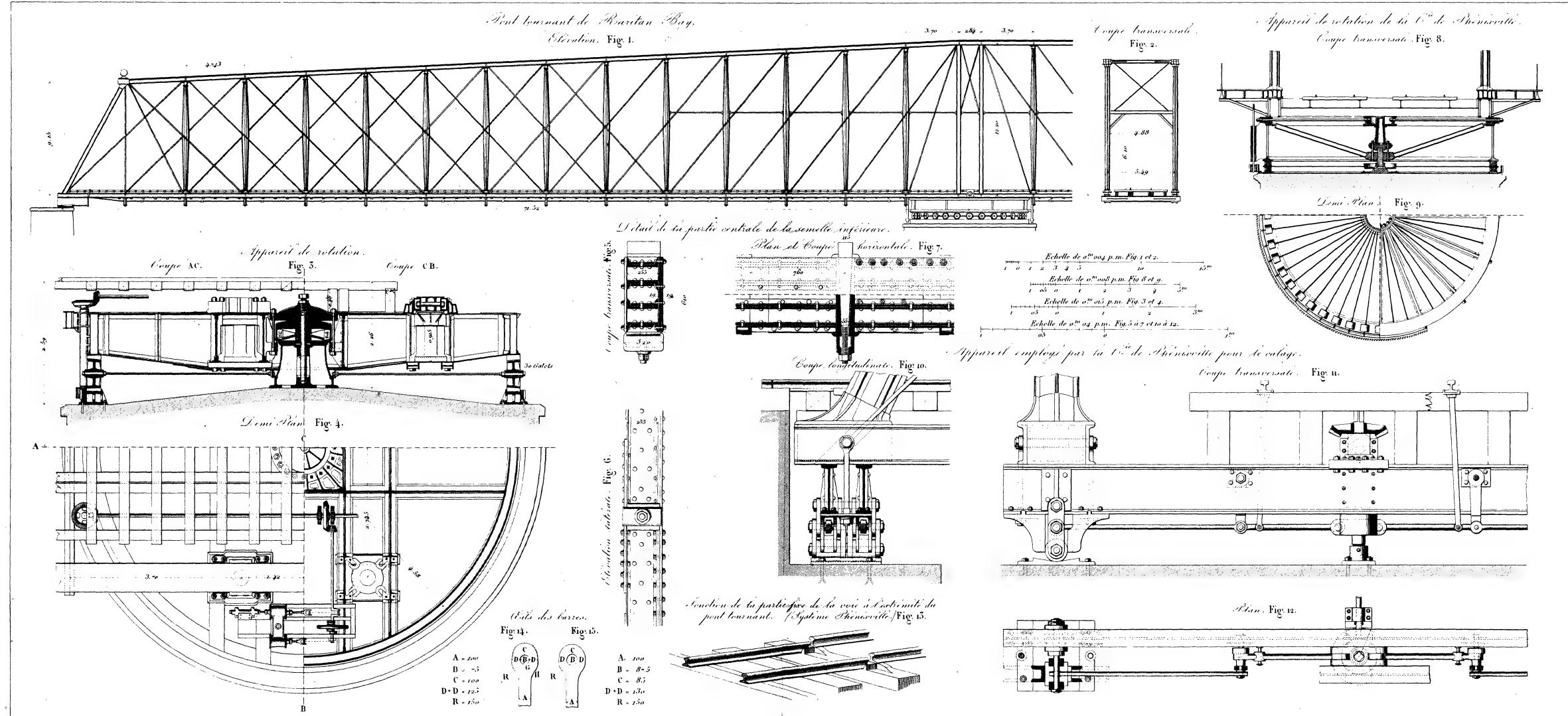






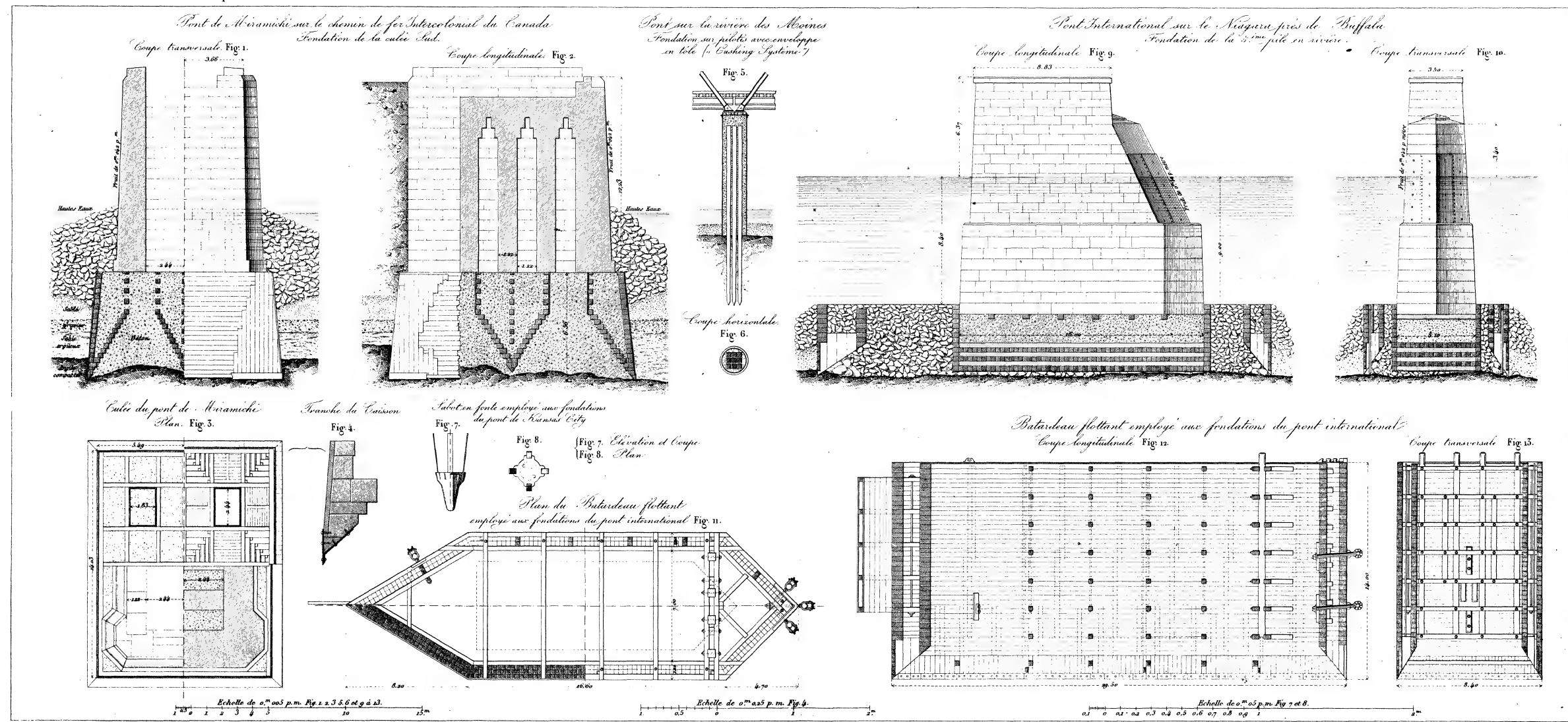


## PONTS TOURNANTS.



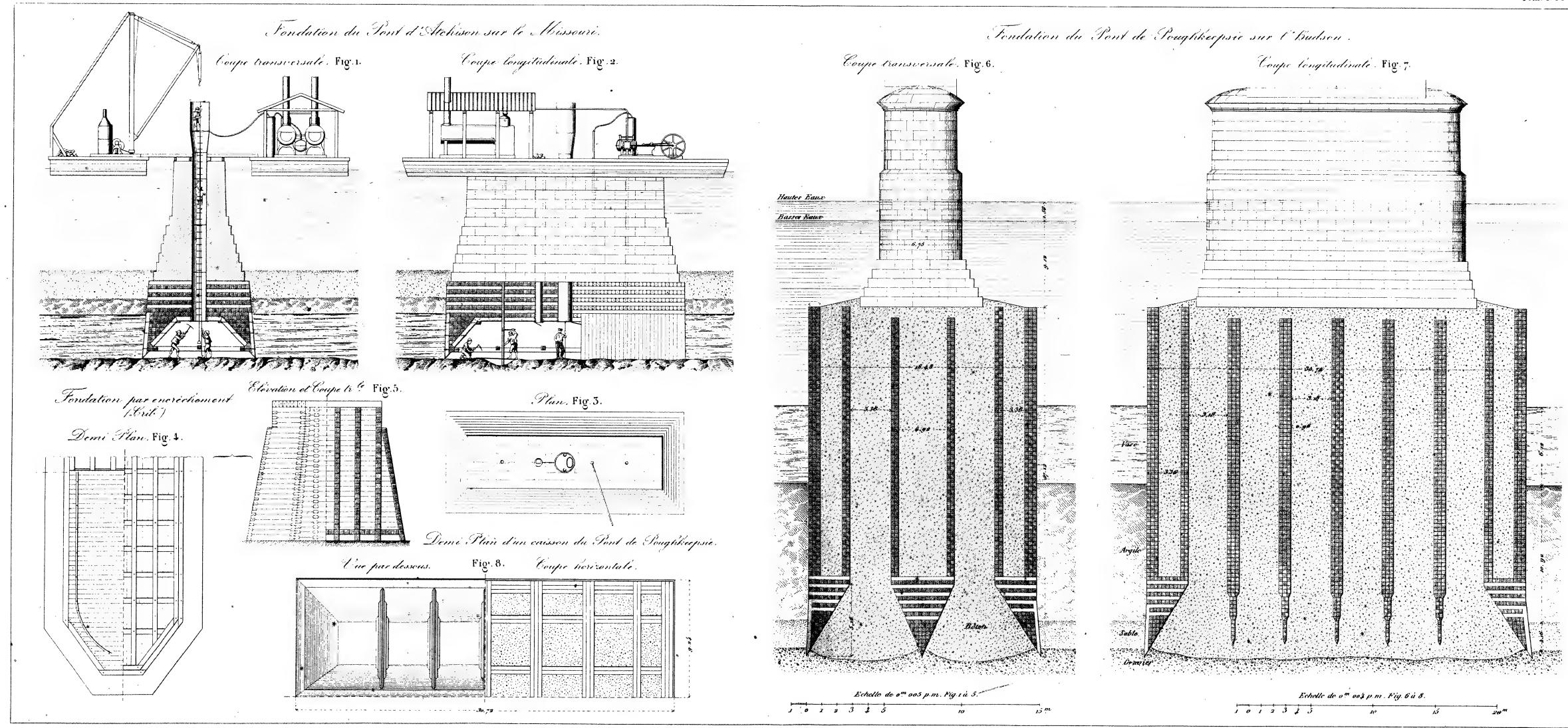


FONDATIONS.



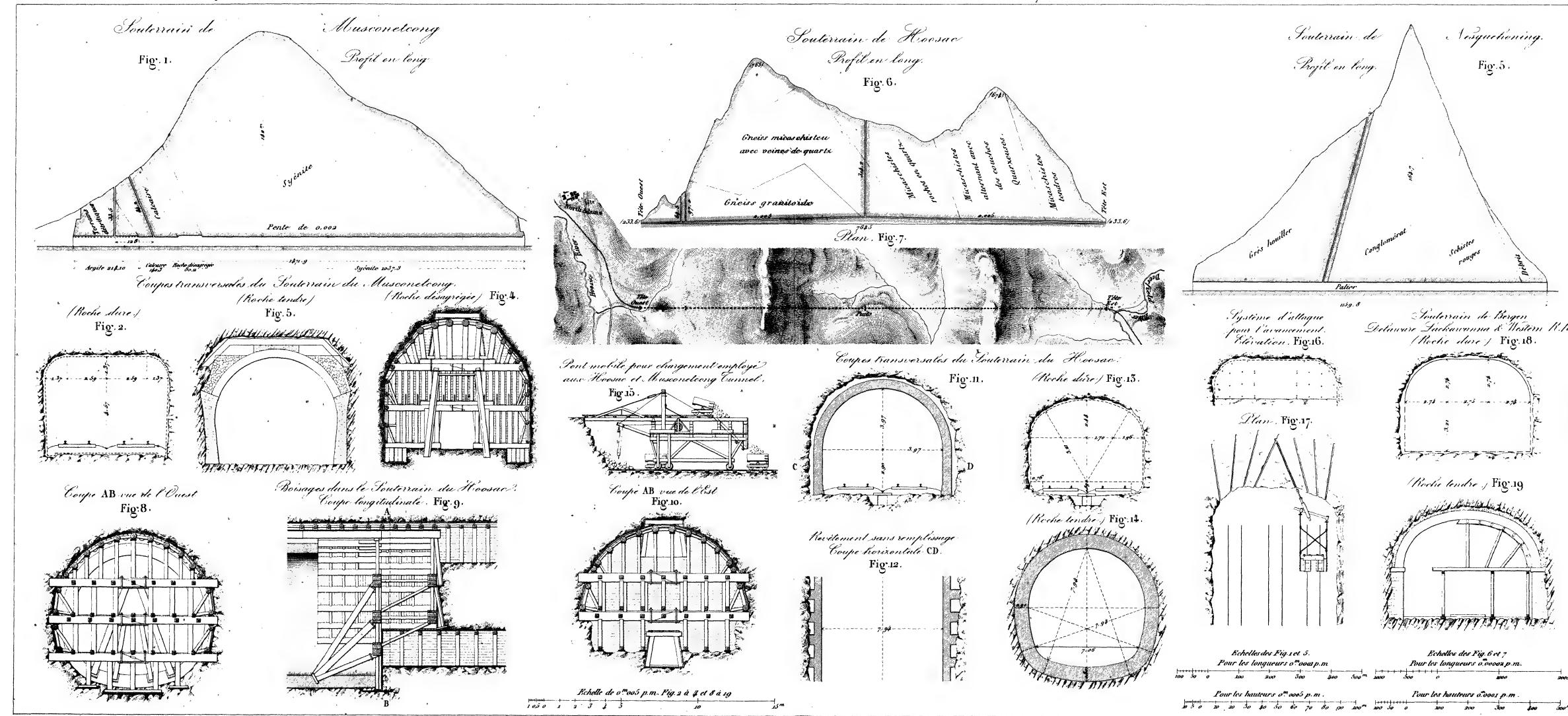


## FONDATIONS



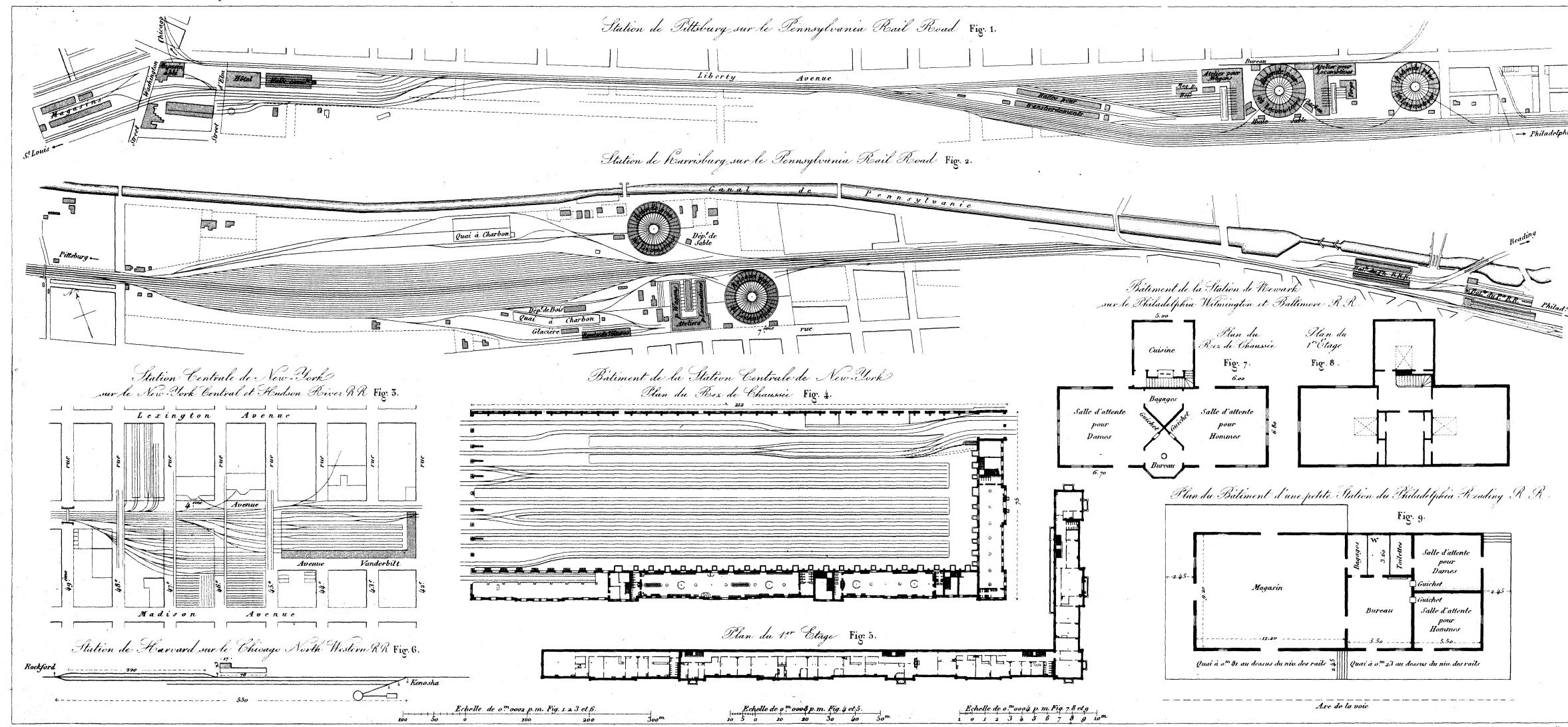


## SOUTERRAINS.





SATIONS ET BATIMENTS.





## STATIONS.—SIGNAUX.—BASCULES.

